

# COUNTRY GUIDE

THE FARM MAGAZINE

*Farmstead mechanization  
for today's*

- Livestock
- Poultry
- Grain

U.83 #2

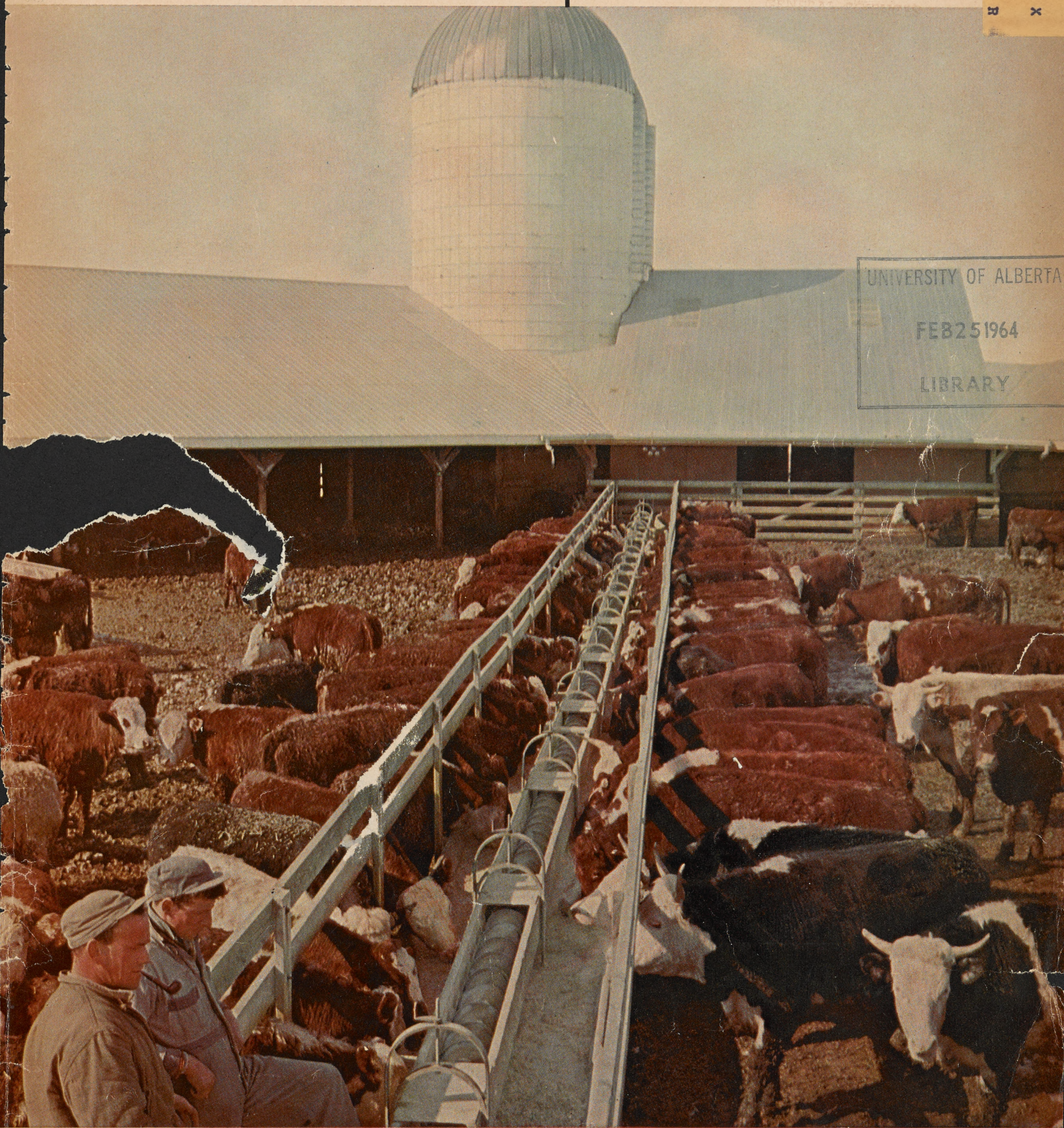
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# COUNTRY GUIDE

Vol. 83, No. 2—FEBRUARY 1964

THE FARM MAGAZINE

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## In This Issue

**NEW LOOK.** This month, we introduce a new cover look. Our signature, "The Country Guide" has appeared on our cover page in unchanged form for nearly two decades. It has introduced each issue into farm homes across the country. But times change and we at the Guide endeavor to keep pace with them. Many of the changes we make are not immediately noticeable. They have to do with the content of the book, our method of handling material, of reporting events and developments. But we think that appearances do count; we want the cover to reflect the content of a magazine serving a progressive industry. So this month, we have a bold new signature. We hope you like it.

**MORE INTENSIVE** livestock production represents one way farm people can boost their income without buying more land. But on most farms, this kind of specialization will likely require mechanization around the farmstead. In this issue, we outline some of the factors to consider, if you are expanding your livestock enterprise.

## Featured

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**COVER:** Feedlots are springing up across the country, most of them on privately-owned farms. This one is bigger-than-average; it's at Massey-Ferguson Farms, Milliken, Ont.—Don Baron photo.

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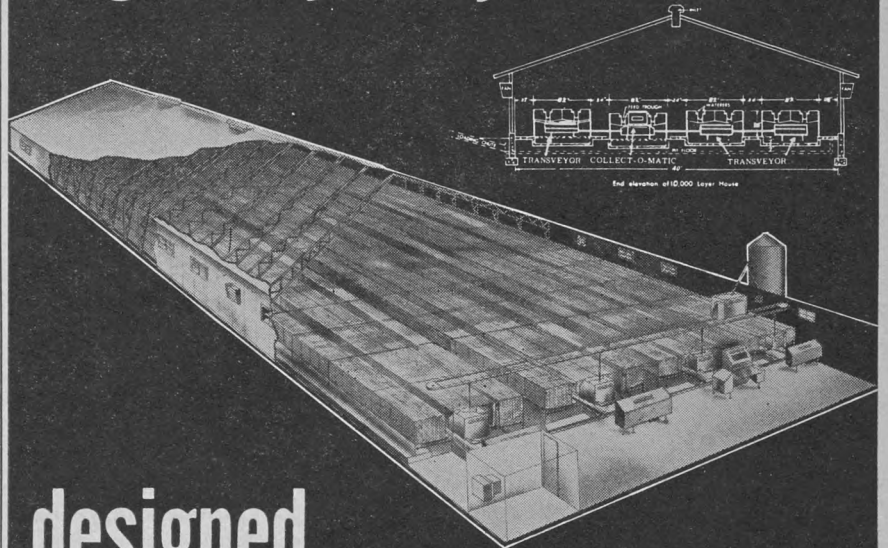
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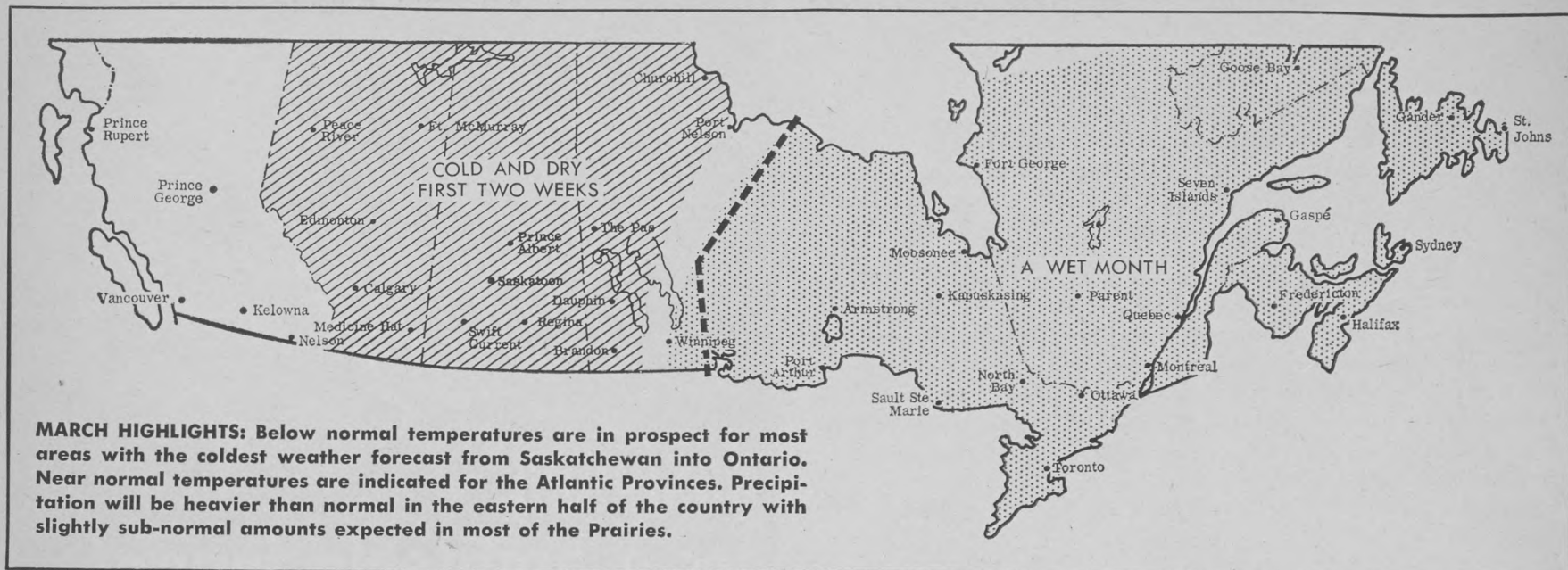
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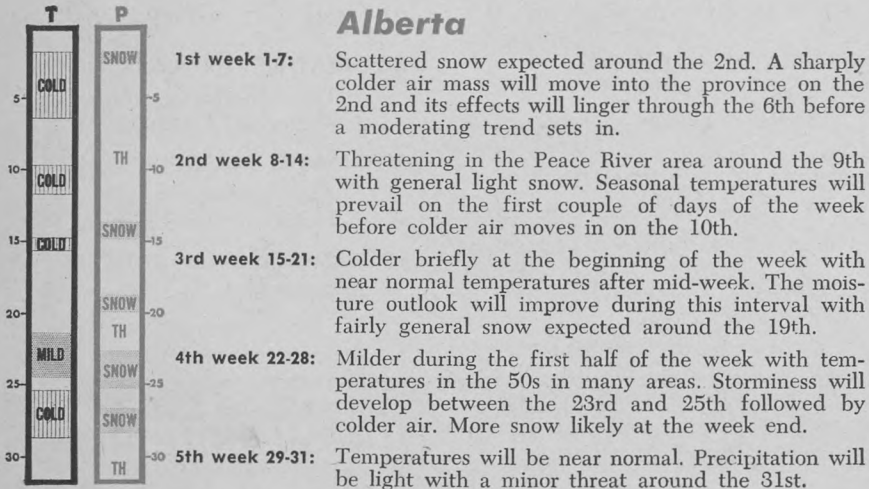




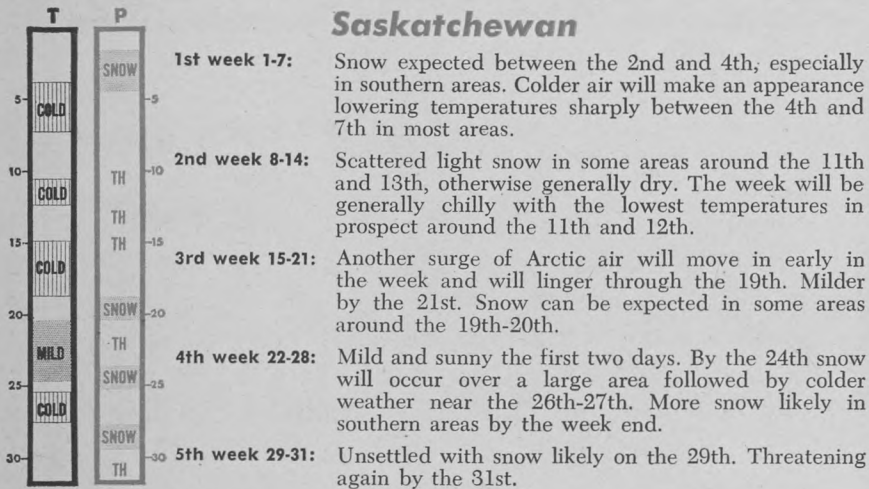
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(Allow a day or two either way in using this forecast. It should be 75 per cent right for your area, but not necessarily for your farm.—Ed.)

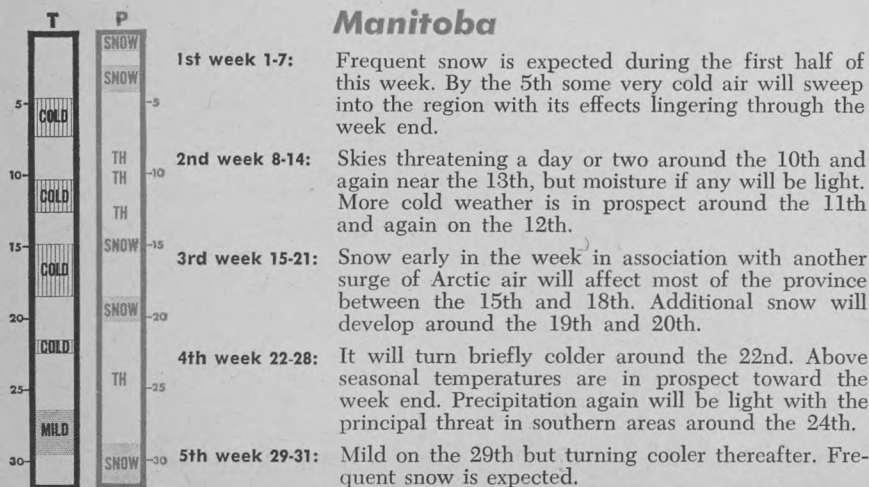
### Alberta



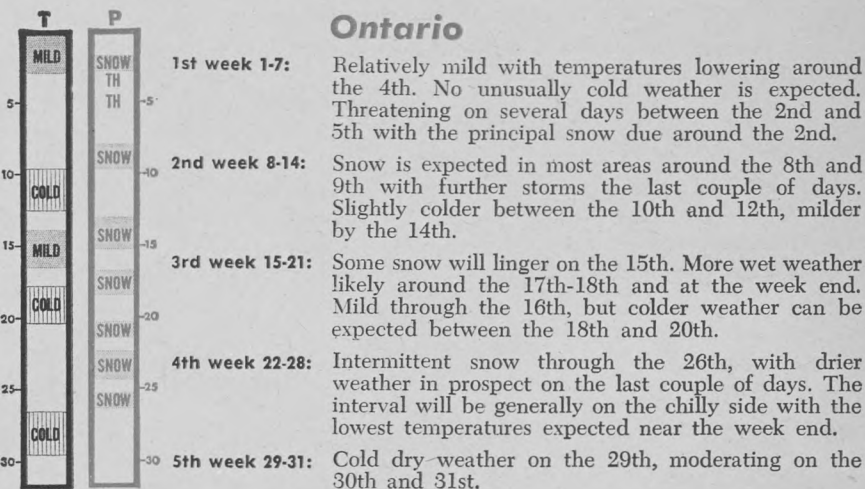
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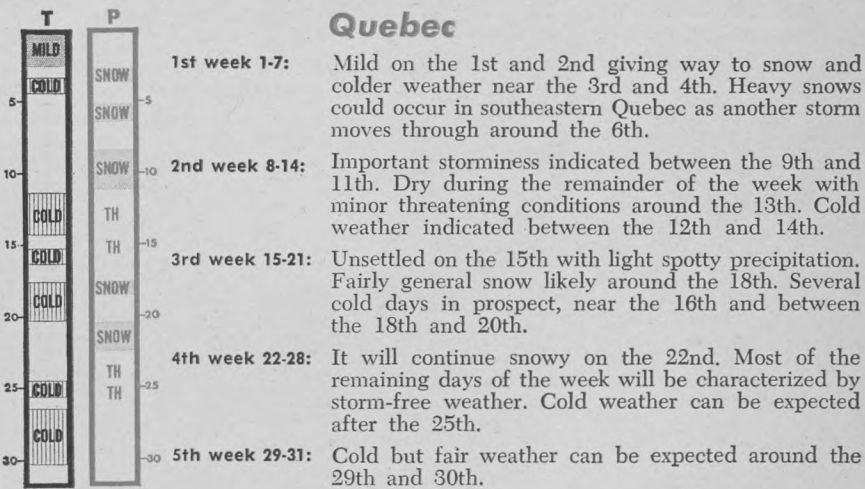
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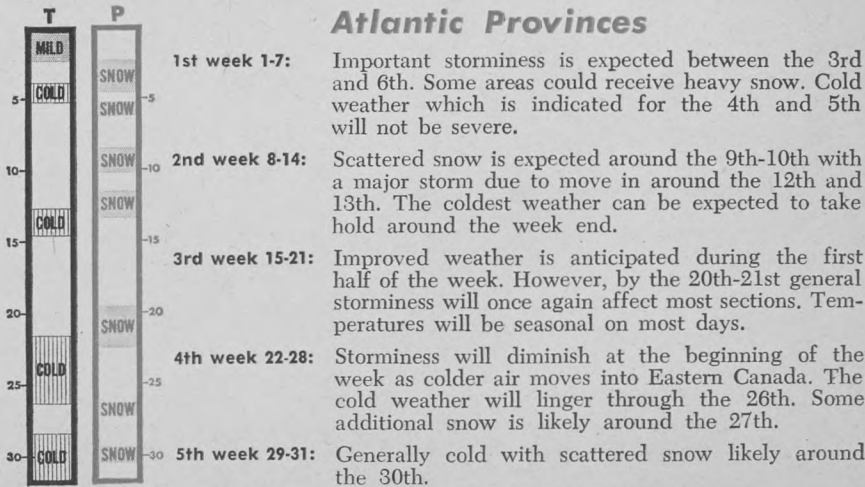
### Ontario



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### Atlantic Provinces



Key to Abbreviations: T, temperature; P, precipitation; CL, cooler; WM, warmer; TH, threatening; SH, showers; R-S, rain or snow.





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# Editorials

## Changes in the Air

ANYONE who is part of the farm scene today can sense the feeling of change that is in the air. It is evident in the increasing attendances at farm meetings, at seed fairs and at soil and crop improvement association meetings; and it is seen in the increasing emphasis being given to new farming practices.

Some of the old caution that has been associated with farm extension programs in the past is giving way to a new urgency and to a new conviction that farmers must move ahead; must produce more and cut their production costs or they will fall behind.

The picture of change was apparent for all to see in Manitoba in late January when that province's Department of Agriculture held its first outlook conference. Mr. Hutton, the Minister of Agriculture, declared that it was essential to restore confidence of farm people in their industry. He stated, "Over the past 20 years Manitoba has lost 1½ per cent of its share of national agricultural production. This

represents a loss of \$40,000,000 annually or \$1,000 per farm." He said that the future well-being and happiness of at least one out of every two wage earners in the province hangs on the attitude of farmers toward their industry. In recent years that attitude has been one of discouragement.

Mr. Hutton had decided that it's better to move ahead and risk a few mistakes than to sit idly by and watch the agricultural industry lost to other more venturesome areas. He deliberately ordered his extension specialists to cast off their shroud of caution and to stick their necks out. They did just that. At the outlook conference they told farmers to take a fresh look at the opportunities in farming; to make more intensive use of their farms; to develop, in fact, enterprises that will compete with those in other areas. They urged farmers to produce more fodder and more livestock and appealed to them to grow more special crops.

The same note was struck in the prairie-

wide television series "This Business of Farming," sponsored by the CBC, the universities, and the Departments of Agriculture of the three provinces. Research and extension scientists showed farmers how, in many cases, they could boost production substantially without turning to more land, simply by using newer farm practices.

These are only a few straws in the wind. But the pattern is apparent. Today, every Canadian farmer must compete with other farmers in other areas and other countries. When a group of farmers cut back their production of hogs, or eggs or turkeys because of dissatisfaction over price, it is more than likely that farmers in some other areas will take up the slack.

It is apparent now that farm people must gear themselves to produce, not on an in-and-out basis, speculating on price from year to year, but on a permanent basis. They must build their farm enterprises solidly and plan their production well into the future.

There is competition ahead. But there are opportunities too. And in this issue of Country Guide we are taking a look at how to grasp these opportunities. You'll find descriptions and pictures of some of the equipment available for farmstead mechanization; the principles to consider as you select equipment that suits your farm; a word of caution on its limitations; and farm stories showing what is being achieved by some people who have already made the move to this kind of farming. We think you will find it interesting. We hope you find it useful. V

## An Answer to Mastitis

THE evidence is in. Mastitis, the perennial problem of the dairy farmer and the industry at large, need be a problem no longer.

Experience in Ontario in the control of mastitis has proved beyond a shadow of doubt that a well conceived and executed program is highly successful. The implications for Ontario and the country at large are inescapable. Mastitis should become the target of a massive frontal attack, aimed at achieving two desirable ends: reducing costs of production, and increasing the quality of milk and milk products.

Dairymen are caught in the cost-price squeeze and mastitis control provides a partial way out. The National Mastitis Council looks at costs in this manner:

"If we consider loss in milk production alone, evidence shows that chronic mastitis results in an average loss in production of 10 per cent per cow. This means that for every 10 infected cows, one cow would be fed and milked for nothing." Multi-million-dollar statistics have little impact on the dairy farmer, but what happens to an individual cow is significant. Consider a \$300 milk cow which loses a quarter and has to be culled for beef, either voluntarily or through local health regulations. That lost quarter would have cost \$150. If one quarter is treated just once, the udder infusion costs about one dollar. With a cow producing 50 pounds daily of \$3.00 milk, the milk loss is a further \$4.50 as the milk must be discarded for 72 hours. Add to this the probable loss of production through the development of scar tissue in the udder, the loss of time during milking, and the risk of infection — then the real cost of mastitis begins to spiral upwards. If milk containing antibiotics is not discarded, the producer may lose his milk market, the cheese maker may

spoil a vat of cheese and the per capita consumption of milk may drop still further.

This is what mastitis costs without an effective control program. A fee well above the nominal one dollar charged per cow in Ontario's pilot project would still look like the best bargain the farmer could get today. A program can provide technical facilities and advice; it isn't worth a pinch of penicillin without the enthusiastic involvement of the individual farmer. Success demands a good farm management. Quite apart from the satisfaction of keeping a healthier herd and selling better quality milk, the farmer gets other tangible benefits:

- Milk sales can be increased.
- Cows can be kept in production to a greater age, thereby increasing the potential for the sale of breeding stock.
- Cows from clean herds fetch a premium in the sale ring. Milk groups and sales managers should back any effective mastitis control program.

Any form of agricultural subsidy is currently subject to censure by vocal urban groups. An effective mastitis control program could be of immediate and lasting benefit to the producer, the dairy industry and the consumer. Technical and financial assistance by government is clearly justified. V

## A Need for Confidence

THERE may be no winner declared in the present squabble over hog marketing in Western Canada. The parties primarily involved are the Farmers Unions, which are spearheading drives for marketing boards in the three provinces, and various livestock associations which are leading a fight against the proposed boards. This has become a battle among farm organizations, and there is seldom a winner in such circumstances.

But there may be a loser. When the dust has settled it may well be that the hog indus-

try itself, which is the almost forgotten core of the issue, could be the victim.

This is the point that seems to have been overlooked by some of the more zealous of the pro- and anti-hog board groups. The hog industry in the West is indeed falling behind. Production in Saskatchewan has dropped to half its high wartime level. In Manitoba, hog population dropped 17 per cent in 1963. Even in Alberta, interest in hogs has declined in recent years.

A lack of confidence by hog producers in the hog marketing system is almost certainly one of the reasons why progress in the industry is slow. The attention of producers has been focused on the ills of the marketing system during recent years. When hog producers congregate, too often the talk is of marketing, yet hogmen won't keep pace with producers in other areas until they turn their full attention to the business of building sound hog enterprises at home.

The hog board idea has won the support of many people involved in the swine industry. A large meat packer in Saskatchewan has endorsed it. The Meat Packers Council has gone on record as being agreeable to a marketing board if producers want one, providing the selling system is a fair one. The Canadian Federation of Agriculture has endorsed the marketing board idea, in the belief that producers are bound to benefit from orderly marketing. The Saskatchewan Wheat Pool has declared that a Marketing Board could help restore confidence in the hog industry, and called confidence a necessary ingredient in stabilizing the industry in the interests of producers and packers alike.

But despite this support, it is now apparent that there is bitter opposition to the hog board idea from some quarters. Hog boards can't operate successfully until they have the support of most of the producers involved. Nevertheless, the swine industry on the prairies will be unable to take full advantage of its opportunities for development until it solves its marketing problems. V



# GUIDE POSTS

UP-TO-DATE  
FARM MARKET  
FORECASTS

**FARM CASH** is expected to reach another new record this year. However, farm costs are also rising. Wheat sales will account for much of income increase so other producers likely to show little if any net gain for 1964.

**WHEAT** still makes headlines as importers continue to enquire, although additional orders for delivery this crop year cannot be taken. Producers should deliver quotas as they become available to make sure wheat is in position for export when needed.

**BROILER PRICES** running several cents below beginning of 1963 reflect larger supplies. No sign of letup in production, except in British Columbia where Marketing Board has ordered cuts, so cheap broilers in prospect for next few months.

**EGG MARKETINGS** continue to keep in line with requirements. Little change in supply is in prospect before April or May. By then increased numbers of layers indicates more eggs to come forward and possibly price reductions.

**HOG MARKETINGS** running well above last year so lower prices likely for at least a month or so. However, improved American prices expected as their supplies shrink in the second quarter. This should firm up our market, as the pressure of American imports is lifted.

**FED CATTLE** continue to come to market in substantial numbers and little change looked for because of large number on feed. Market being maintained at current levels by Canadians eating more good beef (choice and good grades) than ever before.

**RYE PRICES** rose substantially in the first half of this crop year, despite larger Canadian supplies. The world rye crop was a small one and prices should remain favorable for the rest of the crop year.

**OAT** usage is large, but even with some exports will finish the crop year with a further increase in carryover. Thus, acreage about the same as last year should assure adequate supplies.

**BARLEY** carryover at the end of July should be about same as last year so, like oats, an acreage about same as 1963 should look after requirements.

**TURKEY** bargain prices of Christmas seem likely to disappear at least until new crop turkeys appear.

## Where Do We Stand on Hybrid Wheat?

*Within 2 years, we should know if hybrid wheat, which could revolutionize the industry, can be produced commercially*

**E**VER since the development of corn hybrids pushed up yields to undreamed of levels, grain growers have been looking for a similar break-through in wheat. Now, that dream may become a reality. Researchers have found a way to produce hybrid wheat. The only question is, will it be possible to transfer the program from the research laboratory and the experimental farm out into the fields on Canadian farms.

The development holds out tremendous possibilities. It has people speculating that it will revolutionize wheat production.

According to Prof. Len Shebeski of the University of Manitoba, hybrids developed from the right combination of parents will out-yield normal wheat by up to 50 per cent. He predicts that it will be possible to produce hybrids which yield high quality milling wheat. In fact, in Shebeski's view the only question mark in the whole proposal now is the ability of scientists to find a way to produce the hybrid seed in quantity.

Shebeski is in a good position to appraise the situation. He is a key scientist in the world-wide development of hybrid wheat. He has been invited to attend conferences and address meetings on the subject, in the United States, on several occasions. His own efforts are being devoted to solving the remaining problems that prevent hybrid wheat from becoming a reality on farms today. He predicts that within 2 years, we will know for certain whether it will be possible to produce hybrid wheat on farms across the country. It will depend, he says, on whether some way can be found to get a sufficient seed set of the hybrid to make commercial production feasible.

Developing hybrid wheat has been vastly more difficult than developing hybrid corn. The reason is that corn is normally cross-pollinated. Pollen from the tassels of the plant sift down onto the silks of the cobs to pollinate them. It is relatively easy to create male-sterile corn plants. All you do is walk down the rows and pull off the tassels from each plant so it will be cross-pollinated by another variety. The resulting hybrid seed will produce normal self-pollinating plants for commercial growers, who leave the tassels on.

The situation is different with wheat which is normally self-pollinated. Each wheat flower contains both pollen-producing male parts and female parts. Both parts are enclosed and fertilization takes place while the flower is still closed. This insures inbreeding.

If crossing to produce hybrid seed is to be accomplished, it must be done by hand. This is such a time-consuming operation as to be impractical for commercial use.

A break-through to solve this problem was made in 1957 when Japanese scientists discovered male-sterile wheat. These plants did not produce their own pollen. As a result

they could be cross-pollinated. However, even though hybrid seed could now be produced, the hybrid plants grown from such seed were sterile. It was in 1962 that a fertility-restorer gene was discovered in some wheat by researchers at the University of Nebraska. When this wheat was crossed with the male-sterile wheat it permitted normal pollen production in the next generation. It represented the final step which could make hybrid wheat possible.

Prof. Shebeski points out that it is now quite possible to introduce both of these factors into any wheats that are grown today. This means that seed stock can be developed from present varieties, which can then be used as the parents in a hybrid pro-



*[Guide photo]*  
**Prof. Len Shebeski examines some test plants in U. of M. greenhouses.**

gram. He suggests that once the best combination of wheats for use in a hybrid program are sorted out, a program to produce hybrid seed could develop rapidly. He is presently involved in producing several of the parent wheats for a hybrid program and from these will select combinations which could be used by the commercial seed wheat grower.

On the small plot scale, seed sets of the sterile lines have been low. However, he says that on a large field scale, results may be more promising because a much larger pollen mass will be available.

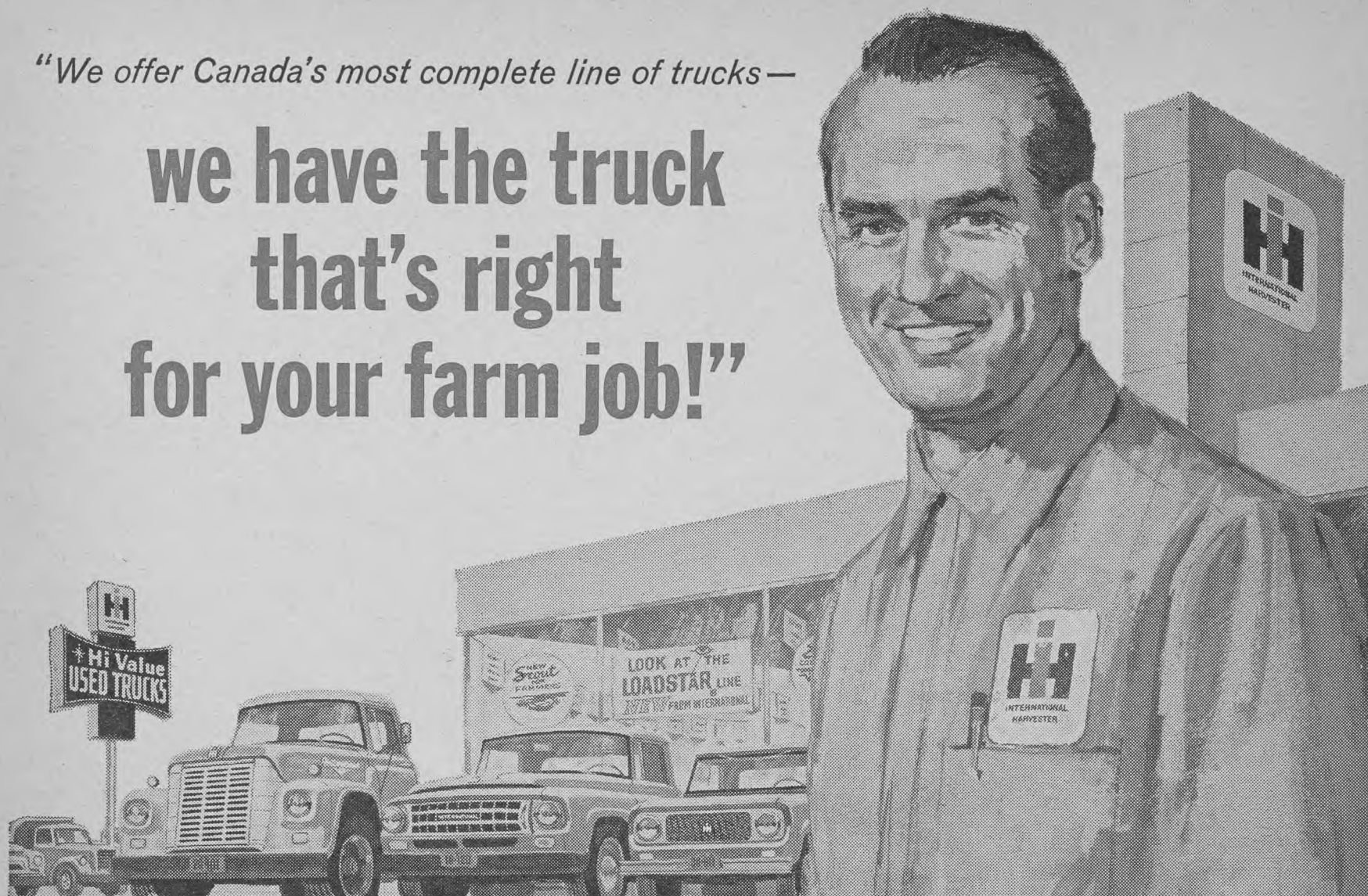
If it proves to be possible to produce hybrid seed commercially, Prof. Shebeski predicts that it will be about 7 years before farmers would be able to reap the benefits by planting hybrid seed on their farms. It would take that long to develop the methods used in seed production and to develop the hybrids which would produce acceptable milling quality wheat.

Farmers will ask several questions about hybrid seed. Cost is one of them. Surplus production is another. Will it pay a grower to buy expensive seed which will only aggravate his surplus problem in years when the market is limited? On the other hand, it might prove a boon if he can grow the same amount of wheat on fewer acres and use the extra land for some other crop.—Staff report. V



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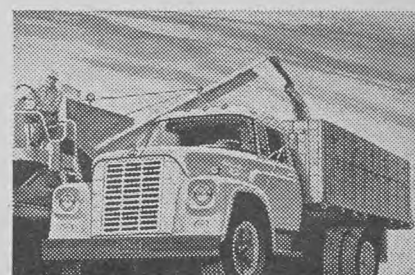
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# What's Happening

## News Highlights . . .

Winter wheat acreage in the United States, which has been officially reported at 43 million acres or an increase of only 2 per cent, has not borne out earlier predictions that there was likely to be a greatly increased area under wheat in 1963-64.

The United States Department of Agriculture is tightening up official standards for grades of wheat, as a step to increase dollar sales of wheat in overseas markets. The new standard is to become effective May 1, Secretary of Agriculture Orville Freeman has announced.

One thousand Junior Farmers gathered in Toronto for the Annual Junior Farmer of Ontario Conference to mark the beginning of Anniversary Year celebrations. Fifty years ago, Junior Farmer Improvement Associations were organized in four Ontario counties to mark the beginning of this movement.

Meat Packers who want to be successful in the future will have to be alert to changes in economic conditions and to shifts in demand for products, according to H. K. Leckie, General Manager of the Meat Packers Council of Canada.

Although flax is a new crop in New Brunswick it has grown well on farms there during the past 2 years and acreage expanded to 1,100 in 1963. About 300,000 pounds of flax were harvested. Now a Provincial Flax Committee has been organized.

Dealers in insecticides used for agricultural purposes in Manitoba are attending short courses being held throughout the province. They must attend a course in order to qualify for a license to sell the chemicals.

A recently published Farm Account Book, compiled by agricultural economists from the three prairie provinces, can help farmers develop a good accounting system. The book entitled "Prairie Provinces Farm Account Book" is recommended and distributed in both Manitoba and Alberta. It is available from ag. reps. and district agriculturists. If used properly the book will show the farmer his best combination of land, buildings, machinery, capital and labor; will indicate his most profitable and efficient enterprises; and show where less profitable enterprises are weak. It is further designed to greatly simplify income tax filing.

An agricultural weather forecasting service developed as a pilot project will be inaugurated this spring in the Saskatoon forecast district — an area covering about 30,000 square miles. The project will involve daily weather outlook programs on the local news media that will be slanted specifically toward current farm operations in the area. The forecasters will work closely with the ag. reps. in the district. The new project will be co-ordinated by the Saskatchewan Research Council in co-operation with the Meteorological Branch of the Department of Trans-

port and the University of Saskatchewan. A similar project has been under way for several years in Alberta and has been acclaimed by the farming public there.

A correspondence course in the Fundamentals of Farm Bookkeeping is available from the University of

Alberta, Department of Extension. The course is completely contained in a handbook which includes lessons and exercises.

Science has come to the livestock showing. A Highland steer which nearly died from pneumonia at the Smithfield Show in Britain had its life saved by oxygen treatment. The next day it was sufficiently recovered to win a first prize in its class. An oxygen mask especially adapted for use on cattle was used for the treatment.

U.S. Secretary of Agriculture Orville Freeman states that his govern-

ment is conducting informal discussions with some foreign countries which may lead to restrictions of beef imports into the U.S. Cattle-men in that country have complained that expanded beef imports in the past 2 years have caused fed cattle prices to drop significantly.

A news report from Washington states that U.S. grain traders have asked for help from the Department of Agriculture to make American wheat exports more competitive through a system of forward pricing. The request was made at a conference with Agriculture Secretary Or-



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ville Freeman to explore possible responses to the pricing methods of the Canadian Wheat Board. Earlier, the Department had charged that Canada's forward pricing system in its mammoth deals with Red China, Russia, Japan and Great Britain had held down wheat prices to the detriment of both Canada and the United States.

V

#### DEAN OF NEW VETERINARY COLLEGE

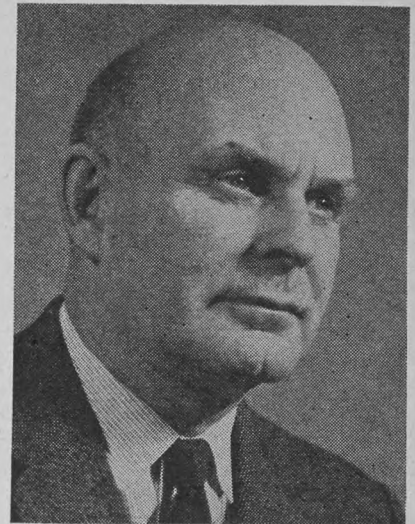
Dr. D. L. T. (Larry) Smith assumed his new responsibilities February 1, as Dean of Veterinary Medicine at the University of Saskatchewan.

Dr. Smith has earned an enviable reputation as Head of Pathology and Bacteriology at the Ontario Veterinary College, Guelph. OVC thus contributes a third Dean to another college: Dr. Jim Henderson recently moved to Washington State, while Dr. D. C. Blood became Dean of the new college at Melbourne, Australia.

The establishment of a second English-speaking veterinary college in Canada, with particular emphasis on western agriculture, now moves a step nearer fulfillment. Dr. Smith will have the benefit of the strong medical and agricultural faculties already established on the campus.

When the college opens in the fall of this year, the initial emphasis will be upon teaching. Students in the four western provinces are now preparing for entrance by taking a 2-year pre-veterinary course. The veterinary course itself will take another 4 years. In developing the new Veterinary faculty, Dr. Smith plans to emphasize research, extension and diagnostic work. He will stress preventive medicine and herd health programs too. A practical on-the-farm veterinary practice will follow, with the establishment of a clinic comparable to OVC's "Farm Service."

"Establishment of a veterinary college in Western Canada" says Dr. Smith, "is long overdue. It is no

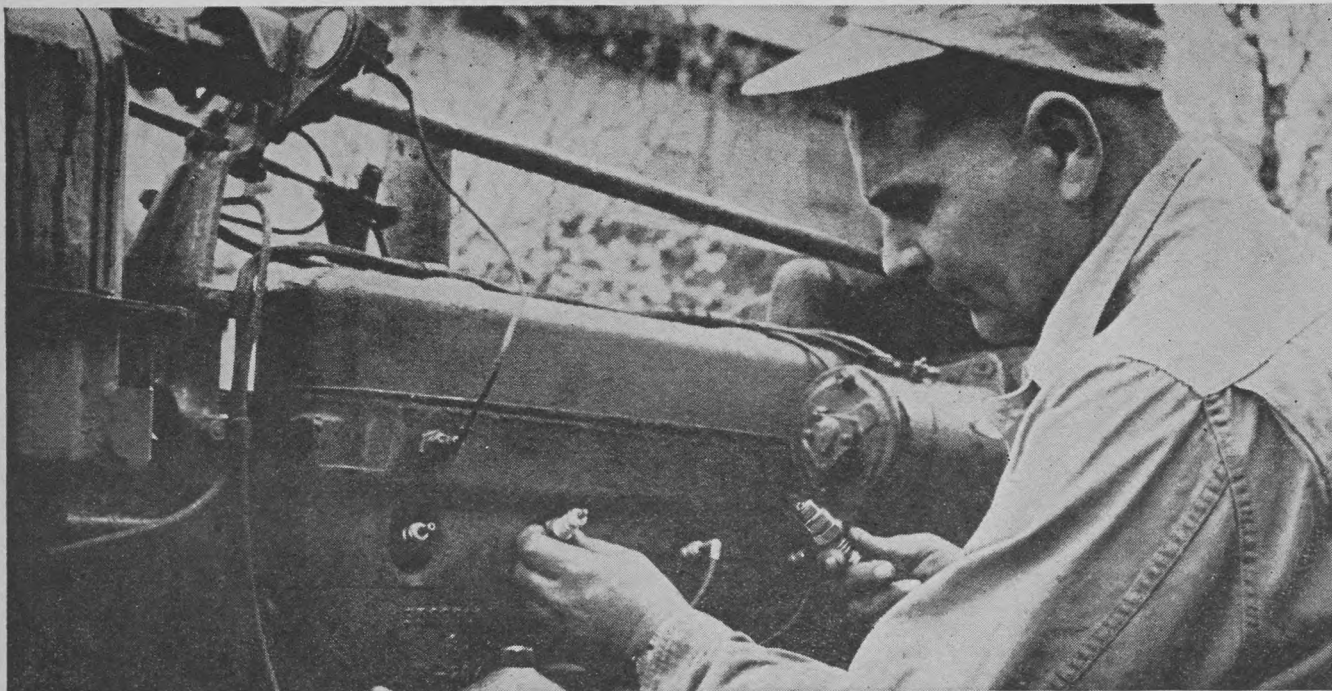


Dr. Larry Smith

longer possible for other schools to accommodate qualified student applicants; there is an extreme shortage of qualified veterinarians especially in Western Canada."—P.L.

V

## Here: 5 fast ways for you to get more horsepower — more gas economy from your tractor



Recent studies by tractor engineers show that even a minimum tractor tune-up will restore an average 11.2 per cent of horsepower and improve gasoline economy by 13.3 per cent. Here's what the engineers recommend to you.

Even though your tractor *seems* to be operating all right, maintenance neglect takes a higher toll in lost power and wasted gasoline than you realize. And these losses result from a need for *minor* maintenance.

#### "Minor" Tune-Ups Studied

In arriving at the figures of 11.2 per cent loss in horsepower and 13.3 per cent loss in gasoline economy, the engineers made the following tune-up operations:

1. Adjust carburetor
2. Service air cleaner
3. Set timing
4. Adjust governor
5. Replace spark plugs

In some cases, points and condenser were also replaced. Of these five operations, spark plug replacement pays the biggest returns when a tune-up is needed.

#### Plugs Pay Off Fast

Tests show that replacing *spark plugs alone* can restore 6.7 per cent of horsepower and improve gasoline economy by 7.9 per cent. This was proved by the recent tune-up studies and in hundreds of "borderline" spark plug tractor tests made by agricultural colleges and by engineers over the past five years.

In these tests, all evidence points to the fact that the most economical time for replacing tractor spark plugs is every 250 operating hours. Since the average tractor operates about 600 hours a year, twice-a-year plug changes will meet the average tractor's need.

#### When Should You Tune-Up?

On the average, twice a year is the recommended interval. As the engineers point out, it is uneconomical to try to "stretch" the life of spark plugs. The losses in power and gasoline cost far more than a set of new Champions twice a year.

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#### TOBACCO IN MARITIMES

Frost hit hard at the tobacco industry in the Maritimes last fall. Half of the 114-acre crop in New Brunswick was damaged before it could be harvested. About 70,000 lb. were harvested. In Nova Scotia, of the estimated 235,000 lb. grown, 80,000 were lost to frost. Prince Edward Island, which has the largest acreage in the area, suffered the least. Ninety per cent of the crop from its 470 acres were harvested. Estimated yield is 350,000 lb. of tobacco. Frost losses were estimated at 100,000 lb.

V

#### IT COULD HAPPEN TO YOU

Last October 28, the Washington State Department of Agriculture shut down the operations of a Yakima County dairy farmer because of DDT residues found in the milk. Department inspectors traced the DDT to a small lot of corn silage the dairyman had purchased from a neighbor.

As one observer put it, "This could happen to any dairyman anywhere."

Since the closure, the dairyman has been pouring all the milk from his 100-cow Holstein herd down the drain. His daily loss has been estimated at about \$300, including value of the milk, feed and labor. People in the area have started a fund-raising drive to help this farmer keep his herd together until the DDT can be purged from the body fat of his cows.

Last November dairy scientists at Washington State University developed a 7-day "crash diet" for 11 of the cows in an effort to metabolize the chemical in them, but results have been inconclusive. Another series of tests have been made on the herd using three different chemicals. Researchers report that a California herd with the same problem has been milked for 8 months and they still haven't been able to get rid of the DDT.—C.V.F.

V



# What Farm Organizations Are Doing

## Federation Looks Ahead

The Farmers' Parliament lined up policy for 1964, at Charlottetown, P.E.I.

DELEGATES from farm areas across the country converged on Charlottetown in January to adopt a farm policy for the Canadian Federation of Agriculture, or, as it is often called, the Farmers' Parliament. During the 3-day sessions the delegates considered matters of importance to just about every phase of Agriculture. And through the passing of their resolutions indicated the direction which they would like agriculture and government policy to travel in the months ahead.

### Dairy Policy

In dealing with dairy policy, resolutions were passed requesting the Federal Government to:

1. Maintain the present support price on butter and the 14½-cent per lb. subsidy on butterfat.
2. Retain the support price on cheese at the current level as well as the 30 cents per 100 lb. subsidy on milk going into the manufacture of cheddar cheese.
3. Re-establish the export subsidy of 4 cents a lb. on cheddar cheese

going to the United Kingdom and extend the export subsidy to all types of cheese made from whole milk going to other countries.

4. Negotiate an increase in the quota on Canadian cheddar cheese exports to the United States.

5. Continue policies to stabilize the price of skim milk powder and to provide an export subsidy for this product.

6. To develop a school milk program across Canada, and to use surplus milk products in the world food program.

### Grain

1. The Federation reaffirmed its support of the sales policy of the Canadian Wheat Board which has resulted in the recent huge sales.

2. It requested the Government to support the renewal of the International Wheat Agreement when it comes up for re-negotiation.

3. Supported a policy statement urging the Federal Government to set up an Eastern and British Columbia feed grains agency.

### Livestock

The Federation announced preliminary plans to hold a national conference on hog quality in April.

### Trade

Delegates reaffirmed their belief that trade barriers on non-agricultural products should be gradually lowered. They asked the government to take aggressive leadership to this end, because such action would increase world prosperity and expand trade opportunities.

A statement issued by the Federation emphasized that world trade in farm products is an extremely complex business. It stated that Canadian farmers do not and cannot expect to operate in a world of free international trade in farm products. The result would be intolerable instability in the farm sector.

In explaining this statement, the Federation said that governments of every advanced country in the world recognized the need to protect the security and livelihood of farmers. The statement said, "This intervention in part takes the form of trade barriers. Progress toward expanding agricultural trade and prosperity must be obtained by means which recognize this fact. Agricultural trade policy must recognize both the necessity of protection in some cases and the dangers of protection in others and solutions must be found based on agreement, consultation and awareness of the occurrence of agricultural protection. International commodity agree-

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ments should have an important and increasing role to play."

#### Pension

Delegates indicated they want the new contributory pension plan, which is to be introduced at the next session of parliament, made compulsory for farm people. They feared that conditions in agriculture were such that many farmers would refuse to join the pension plan on a voluntary basis, only to regret it later. If this happened, it would mean that a significant and important section of the Canadian working force would

continue to face retirement years without adequate financial provision.

#### Drugs

Delegates agreed to request the Federal Government to implement as soon as possible the recommendations of the Restrictive Trade Practices Commission relative to the cost of drugs. In particular, the CFA delegate body wants to see the abolition of Canadian drug patents which the Commission said was the only effective way to reduce the price of drugs in this country.

#### CBC

The delegates felt it important to recognize publicly at this time the contribution the CBC has made to Canada.

#### Minister Speaks

In addressing the convention, the Federal Minister of Agriculture, Hon. Harry Hays, said that it was time to take the next big steps in the field of farm policy. He indicated the government planned over the next 2 years to introduce new provisions in the field of farm credit and crop insurance, as well as a new

plan to alleviate the capital cost of machinery used in farming operations. V

#### NEWS NOTES

Fishing communities need a program like ARDA, says the **Co-operative Union of Canada**. In a brief to the Federal-Provincial Conference on Fisheries, it stated: "The Canadian Fishing Industry, in some aspects at least, has been in a chronic state of depression. Action by government, fishermen, and fishermen's co-operatives is needed to raise it to a level of rapid growth and prosperity."

Needed measures include special credit services for fishermen and fishermen's co-operatives; more cold storage facilities and federal cold storage subsidies; a more orderly and rational marketing system; more technical training; and extended federal grants for education, says the brief.

A 40-page report on farm organizations was "received" at this year's **Alberta Federation of Agriculture** meeting. The report results from a study which was made to determine the best type of farm organization, keeping in mind the wishes of farm people to have their organizations speak with one voice on matters of farm policy. The study, which took nearly 2 years to complete, recommends the setting up of farm organizations on a county level, with the county board made up of representatives of each member of the AFA. At the provincial level, the functions of the Federation and the Farmers Union should be incorporated into one unit. The report will be referred to member organizations for their consideration and action.

The **National Farmers Union** says taxes are necessary not only to provide services and protection for the community but also to redistribute income between individuals or groups of individuals in society. The statement was made in a brief presented to the Royal Commission on Taxation. The brief also stated that the family farm should be encouraged. It said incentive payments or price supports would be more desirable than tax incentives to encourage farm production.

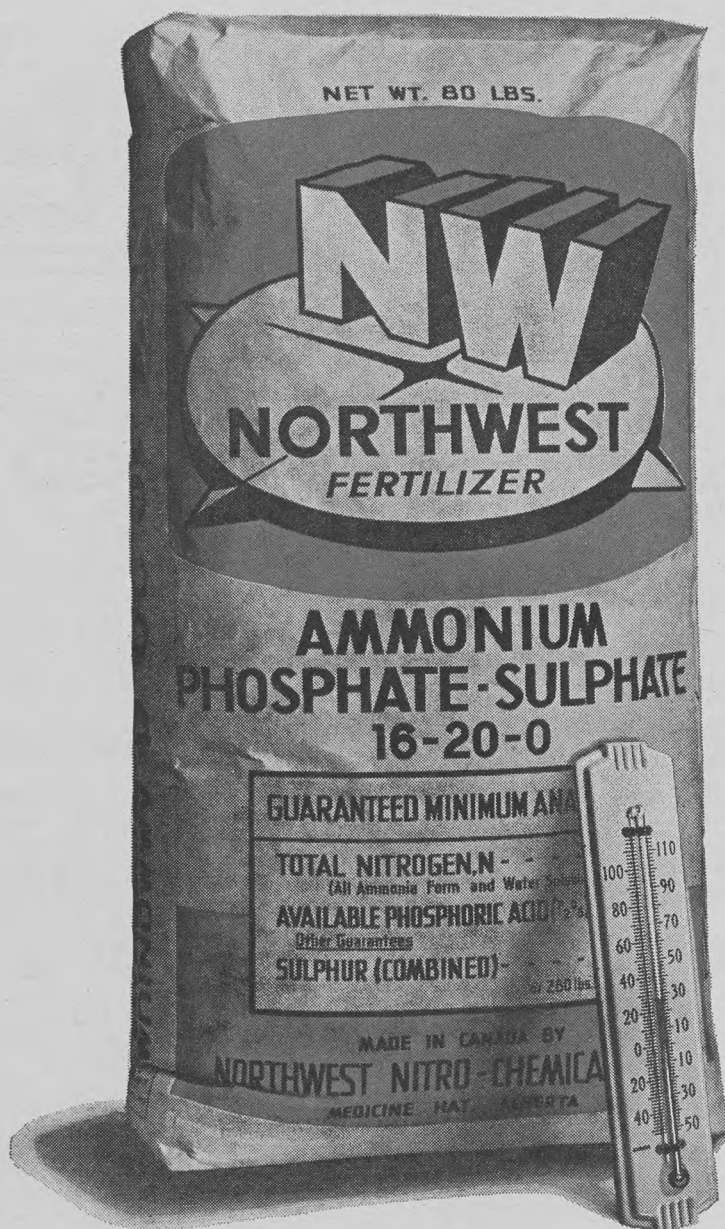
**Manitoba Pool Elevators** and the **Branch Line Association of Manitoba** are organizing a research program in conjunction with farm organizations, grain companies and other interested authorities and organizations. The purpose is to make a careful, detached and objective study of the real costs of the abandonment of branch lines.

Re-elected President of **National Farmers Union** is Alf Cleave from Biggar, Sask. Herb Andresen, has been elected Vice-president. V

#### DAIRY FARMERS TO PLAN AHEAD

Look for more long-term planning from organized dairy farmers. Following the annual meeting of the Dairy Farmers of Canada in Charlottetown, a statement of policy was issued. It included the following items:

- The newly-established Canadian Dairy Advisory Committee is to study trends in the dairy industry, with a (Please turn to page 76)



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# In Praise of Grass

***This dairyman can make a convincing case for quality hay***

**by PETER LEWINGTON**

Field Editor



[Guide photos] Herdsman Wayne Fraser (l.), and Arden Baker's son Howard (r.), examine a sample of grass silage being used at the Bakers' Avondale farm.

**T**HE accent is on grass at Arden Baker's Avondale farm near Brockville, Ont. Not just the growing of two blades where one grew before, but the harvesting of both blades at peak feeding value. "Pasture for our milking herd," says Baker, "is the most valuable crop grown on the farm from the standpoint of net return per acre. No roughage or concentrate will influence milk production as much as a bale of well-cured hay."

A visit to the Baker farm is convincing proof that the grassland philosophy is working well.

Baker is for grass, not against corn, but his increased emphasis on grass has taken place when the pendulum has been swinging to corn. "It wasn't that we couldn't grow corn," says Baker. "For 10 years we grew Leeds County test plots and got 30 tons of forage per acre. We went through a period of some 8 years when we grew both corn and grass. Now we have been without corn for 6 years. What factors influenced Baker to go to grass in the face of the trend to corn?

- No cultivation worries.
- No problems of residual sprays.
- Crops are not affected by early fall frosts.
- Harvesting can be completed in good weather when the ground will support machinery.

"We feel," says Baker, "that a grassland program makes our operation more flexible and greatly simplifies our entire cropping and harvesting program. We purposely try to keep our overall operation simple, because the greater the number of enterprises or crops, the more machinery you need. Complexity in any business is costly."

Let's just take a look at the cropping, harvesting and feeding program in some detail.

**O**F the 325 acres, 35 acres are in well-managed long-term pastures. Some 130 to 140 acres are in hay. Recommended forage varieties are used. In the hay fields, Climax timothy and Vernal alfalfa are predominant. A little La Salle red clover is also sown with Ladino to give some aftermath insurance. As fertility levels increase in the pastures, orchard grass is proving too

aggressive and more brome and timothy are being sown in its stead.

Traditionally, hay and pasture have been established with a nurse crop of grain. Baker, like many farmers, questions the value of this.

"I believe that we have to take grain-growing completely out of our general forage rotation. The separation of hay and grain crops becomes necessary because of the fertility tolerance. In practice, with a good forage program, excessive grain lodging becomes a problem. We took grain-growing out of our forage rotation to get closer to the production potential per acre with our forage crops.

"I've never been a silage enthusiast," says Baker. "I'd rather feed hay. But silage is a seasonal necessity." Two 14' x 36' silos are filled from three sources: the early lush surplus of pasture; a portion of the hay fields in the spring; and, in some years, a late cut of grass when curing becomes difficult.

This is a flexible program and provides some weather insurance. The grass-legume mixtures are ensiled with a 1-man pneumatic harvester at moisture levels far lower than were thought desirable a few years ago. An early cut of silage encourages better quality pastures and a cut of finer hay, low in fiber and high in protein.

Good quality, leafy hay is the main crop. Three crops a year are taken off using a conditioner and baler. Baker is trying some mow-drying of hay. However, last year's weather was exceptionally fine for field curing and so he has no firm conclusions on its merits.

He makes good use of his stored forage. Morning feed consists of a grain ration, some beet pulp and all the grass silage the cows will eat. The balance of the grain ration is fed in the afternoon along with lots of top quality hay. This simple feeding arrangement cuts down labor requirements. There is only one variation: heavier milkers have a restricted silage ration and more good hay.

**W**ITH increased fertility and reliance on grass and legumes, bloat might have become a problem, but it hasn't. "Individual cases may flare up at any time," says Baker, "but we don't think

any more of bloat in summer than in winter. believe fertility balance is a factor in this."

Fertility is carefully balanced; it is also conserved by careful handling of manure. A grating, set in the gutter in the cow stable, drains off the liquids as the gutter cleaner moves the manure across it. The liquid is conserved in a storage tank, and is spread separately.

Arden Baker doesn't believe that if a livestock program works well, it will work better if it gets bigger. "With a dairy herd," he says, "there is a cut-off point at which efficiency drops off. I've started a small beef herd and as this grows I'll cut back to perhaps 55 to 60 milk cows." Right now his Jersey herd numbers 175 head, and 70 of them are milk cows.

"Corn has been a good crop and will probably always be a good crop. No one cropping program will suit all farms or even the same farm indefinitely. For my circumstances I prefer grass, and I'm not convinced that corn could give me a greater tonnage of digestible feed than grass and legumes in the course of a year." ✓

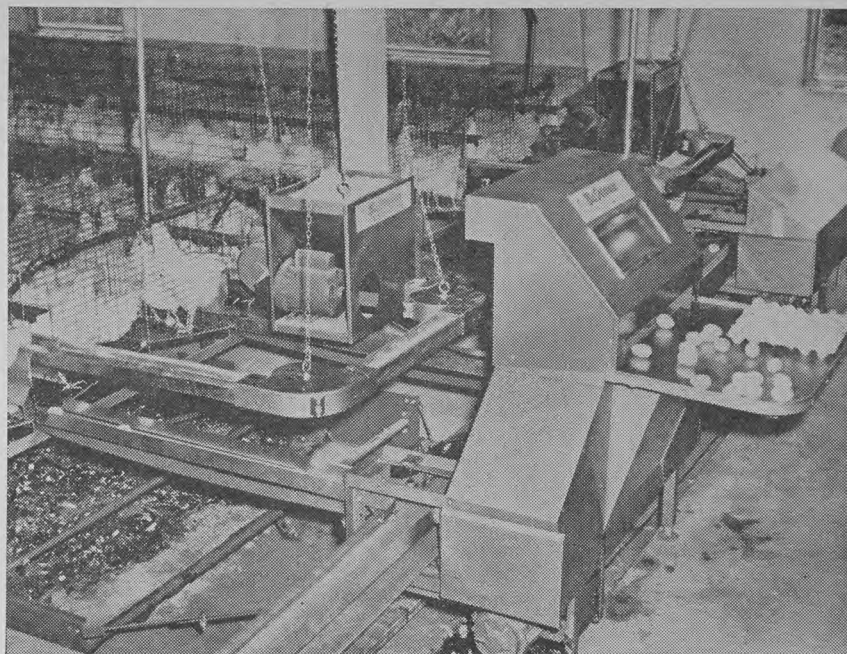


Jersey cows in Arden Baker's herd seem to have no doubt about the palatability of grass silage.





Labor has been cut to a minimum in this hog finishing house which features a double feed line-fed hopper system. Note the slatted flooring throughout.



This 10,000-bird layer house is fully automated, having a central egg collecting unit with transveyor, automatic feeder and a pit-type manure cleaner.

# Don't Lug It— Let It Ride

**Wisely planned automation  
could mean the difference  
between profit and loss  
the experts said**

**by JIM BARNETT**  
Field Editor

LATE last fall close to 1,000 Manitoba farmers traveled to Brandon over the course of 4 days to learn more about automation on the farm. This was the first time a short course on materials handling had been offered in the West. The immediate response was enthusiastic and the demand has assured a repeat performance another year.

The one major point any farmer should consider before embarking on a modernization program involving the purchase of labor-saving equipment is—plan well before you do anything. This was established early in the conference.

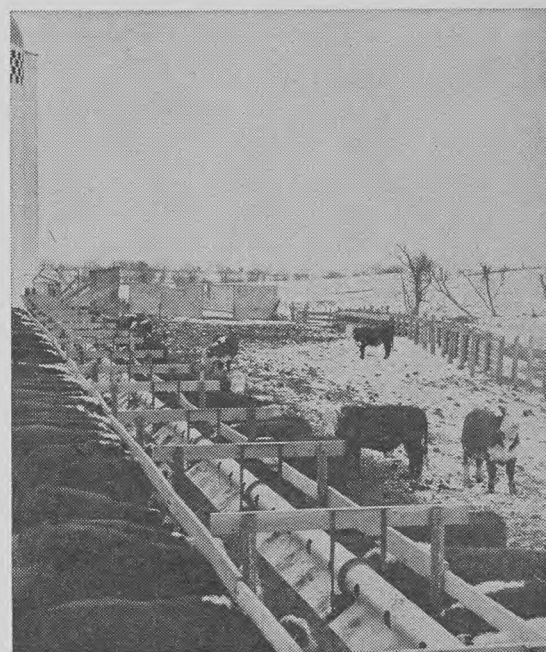
According to Prof. O. L. Symes of the Agricultural Engineering Department, University of Saskatchewan, who was a keynote speaker, here are some of the more important facts which should be taken into account first.

Decide what kind, and how large the enterprise will be when completed; what are the feed storage, processing and handling requirements for the enterprise; what capital investment can be justified to store, process, and handle the materials.

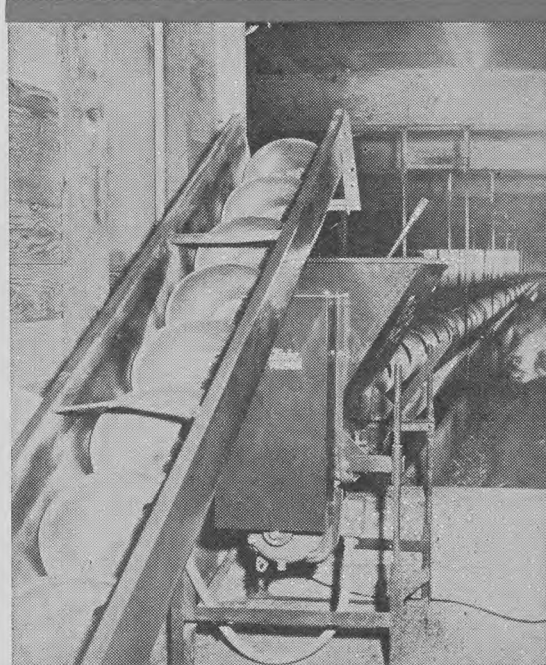
Collect all this information, analyze it and prepare a plan on paper showing the proposed locations of buildings, feed storage, processing center, corrals and feeding equipment. Next, select the type of buildings and feed handling equipment necessary and select power units and controls required to operate the system, taking into consideration future expansion of the enterprise.

Limitations on the growth of some enterprises in the past, he said, could be attributed to the stigma Western farmers attached to indebtedness. Lack of ready capital often retarded the expansion of a unit to the point where it could mean the difference between being economical or otherwise.

Before a farmer considers obtaining credit to expand or automate his enterprise, he should take into account what a materials handling system would provide in terms of labor savings, increased volume, or lower unit production costs. Prof. Symes states, "For every \$1,000 spent on buildings and equipment for a livestock setup, an additional \$1,000 is needed for livestock." Unless the project is properly planned the farmer may find his available money is all tied up in equipment, leaving him without working capital. This would be like having a new tractor in the yard but having no funds to buy fuel.

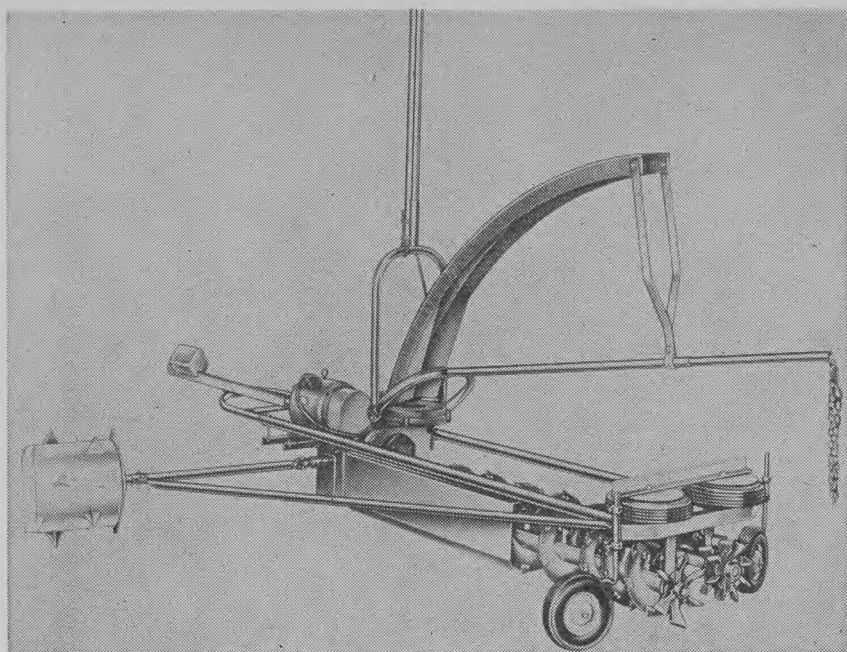


This labor-saving feedlot has a rotor-tube for bunk feeding silage direct from the silo behind.

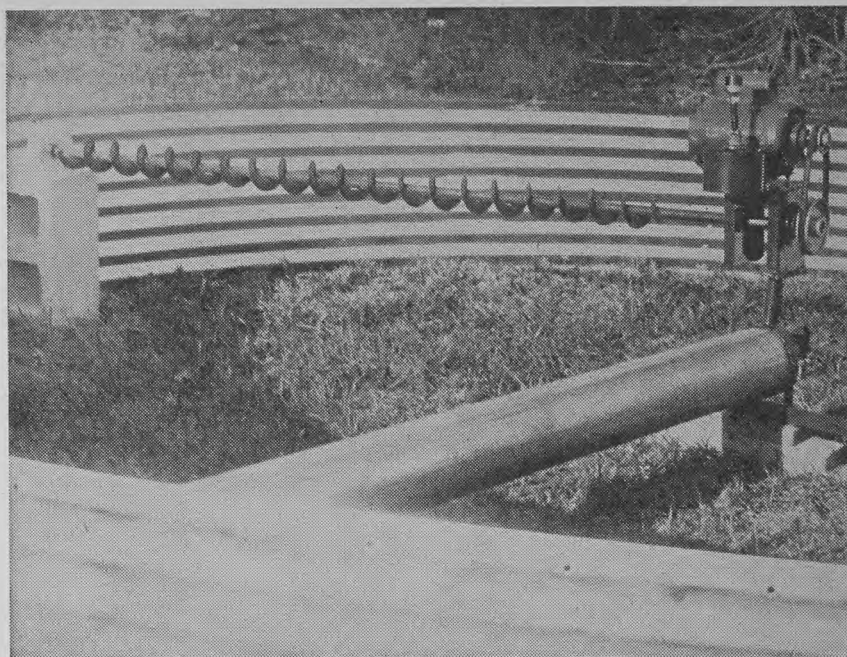


Time and energy are saved by the use of this elevator which places ready-mixed feed in bunk.





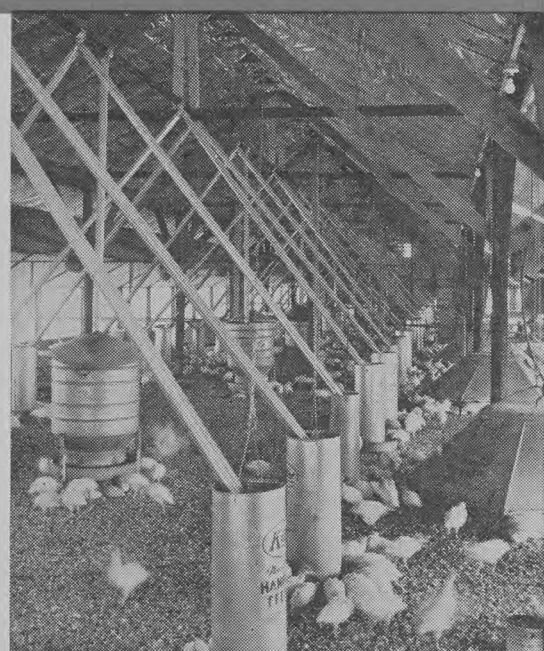
Silo unloaders have made their appearance in recent years and have gone a long way to making tower silos adaptable to automated bunk feeding systems.



The latest innovation in grain handling is this bin unloader which augers the grain to a central hopper from which it is then augered to the outside.



Here a barn cleaner cuts the time spent in the dairy barn. These can operate round the clock.



Feed is dispensed from a metered feed conveyor into individual hoppers in turkey poult house.

## Guidelines for Mechanization

**T**HE Galbraith Brothers of Amprior, Ont., keep about 250 short-keep steers in their feedlot at Renfrew, Ont., the year round and look after them with just a few minutes work each day. It's a push-button business; a way to produce a lot of beef without increasing the work load.

Fred Cohoe's feedlot is bigger still. Fred feeds out 500 calves during the winter on his Woodstock, Ont., farm, then replaces them with short-keep steers during the summer months. One man looks after them, without assistance. He has silos full of grain and silage corn, and also has a push-button feeding system.

These are just two feedlots out of dozens that have been built in recent years. Most aren't as big or as complete as these two, but are being built a step at a time. They are all designed with the same purpose in mind; to permit expansion of the farm livestock enterprise, without adding a heavier labor load.

In planning these feedlots, the owners faced a problem new to their generation. That was the job of deciding which equipment to select from the array of new machines and systems that are available.

Feed handling was the biggest job.

The feeding system starts with the need for grain storage. Then comes a feed processing unit (unless the job is to be done by a custom operator, or the home-grown feed is to be transported into a local feed mill). A method of moving the feed and other ingredients of the ration to the processing unit is required. Feed must be finally moved to the animals to be fed.

Here are some of the possibilities, as set out by agricultural engineer Jack Pos at the Ontario Agricultural College.

**Storage.** It can be in old grain bins on ground or above ground level (so that the processing area can be set up beneath), or in individual overhead or ground level bins outside.

**Loading — Unloading Stored Grain.** Inclined augers, belts or chains can be used, or vertical screws or buckets.

**Processing.** The unit can include a burr mill, a hammermill, or roller, grinder and/or mixer.

**Distribution.** Wagons or carts can play a part here. Mechanical devices such as self-unloading wagons, or pneumatic or mechanical conveyors, are available.

**Feeding.** This can be done by conveyors, self-feeding wagons, or revolving feed bunk or self-feeding hoppers.

### HOW TO CHOOSE A SYSTEM

1. If grain storage is overhead, locate grinder, crusher or whatever processing unit you use, directly underneath. This allows gravity flow of material. If several materials are to be blended into one ration and processed, you can batch-weigh the materials, or regulate their flow through conveying equipment.

2. If processing unit is on same level as grain storage, you'll have to use conveyors, possibly portable ones. If batch weighing is used, a mixer is also required to mix processed feed. Bulk-holding bins may be placed over the processing area to provide for gravity flow.

3. Rebuild grain storage facilities around a new feed-processing area. This may be more satisfactory than trying to renovate old buildings.

### SOME DETAILS ON EQUIPMENT

- **Portable Augers and Conveyors** are the most popular low-cost accessory. A small 4-inch enclosed auger utilizing an electric hand drill for power, unloads 200 bu. of feed per hour from wagons into storage, and from storage into feed mills. Large chain slat conveyors can elevate baled feed into a barn loft. Some units, about 60 feet in length, will elevate silage into a 45-foot tower silo with less horsepower than conventional blowers.

- **Mixing augers** will deliver several feed ingredients to the feed bunk and distribute them uniformly along the bunk. It does this, if operator positions the auger casing with the holes upward, allowing the tube to fill up, and then rotates the tube, pointing holes downward.

- **Vertical Belt Bucket Elevator** is the least expensive and most efficient method of elevating material vertically.

### REGULATING MATERIAL FLOW

Feed meters are used to blend rations, and to combine ground feed uniformly with the silage as it is being fed. Two types are available; one measures by volume, the other by weight.

Volume control is achieved in many ways, some of the more common being:

- Belt conveyors or other flat conveyors with variable speed drives and adjustable baffles to regulate the depth of material on the conveyor.

- Augers with variable speed motors or adjustable pulleys.

- Flute wheel meters, which can usually be salvaged from obsolete grain or fertilizer drills.

- Vibrating meters. The capacity is regulated by adjusting a gate in the discharge trough.

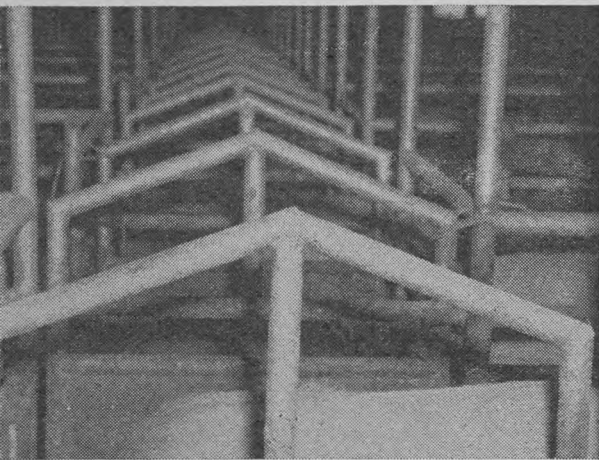


**Some scrap metal — a few lengths of pipe and a**

# Welding Torch in a Hog Barn

by **CLIFF FAULKNER**

Field Editor



[Guide photos]  
When gates are snap locked onto cleaning alley sections of alley become part of the hog pens.



Heavy wire mesh is brazed to pipe in the farrowing pens. Partition is bolted to welded rods.



One of the hot air conduits which run underneath the floor comes up between rearing pens.



Sewer pipe, cut in half makes a good feeding trough for finishing pens at Sigurd Nielsen's.

**A**NYBODY who doubts the value of having an acetylene welding outfit on the farm, and knowing how to use it, should visit Sigurd Nielsen's place on the southern edge of the Winterring Hills near Standard, Alta. In fact, as you turn into the Nielsen farm you pass through an impressive iron gateway which is a tribute to Sigurd's skill as a welder and blacksmith.

Named a Master Farm Family in 1962, the Niensens raise grain, beef, horses and hogs. It's in the hog enterprise that the welding torch has been used to greatest advantage. All pens in both the farrowing and fattening barns have been made on the place from welded lengths of discarded steam piping out of city scrap yards.

The 48 ft. by 64 ft. insulated farrowing barn is of wood-frame construction sheathed on the outside with plywood and on the inside with shiplap. Walls were built in sections in the farm shop and trucked to the building site. The building is heated by four 6-inch hot air conduits which run under the concrete floor. There is one outlet for every two pens located between pens so heat flows both ways. A wooden cover over each outlet throws the heat down where the baby pigs will get the most benefit from it.

At the rear of each pen, gates of welded pipe lead to a cleaning alley. When the gates are open, the alley becomes a part of the pen. When closed, there is a clear passage behind the pens for manure removal. Each gate has an automatic spring lock which snaps shut on contact. All locks are welded to the gate frame. Even the heavy wire mesh at the front of the pens has been attached to the pipe frame by brazing.

The pens accommodate the farm's breeding herd of 40 registered Landrace SPF (Specific Pathogen Free) sows. From this herd the Niensens obtain about 1,200 high quality market hogs a year.

Hogs are finished for market in a combination hog and dairy barn. The building contains 16 hog pens, and stanchions for about eight Holsteins. All the milk is used for the pigs, but the cream is shipped off the farm. Baby pigs get their first taste of cow's milk about a week before they are weaned.

As in the farrowing barn, there are gates at the end of each finishing pen which swing back to form a cleaning alley the length of the building. A manure bucket on an overhead rail runs down the center of each of the three cleaning alleys. This is filled with a shovel, pushed to another part of the barn where it is unloaded into a manure spreader.

Pens in this building consist of sections of pipe rail connected by half-inch steel rods which are welded to the pipe at 3-inch intervals. To make

these pen sections, Sigurd first made a template, or pattern, by boring half-inch holes at the required intervals in a piece of two-by-four. He then cut the two-by-four in half, lengthwise through the holes. The two pieces of wood were laid on the floor with the notches, or "half-holes" facing inwards. Lengths of rod, cut to the desired height of the pens, were placed on the floor opposite each pair of notches. Enough space was left at the top and bottom so the pipe rails could be placed in position, just touching the ends of the rods. The rods were then welded to the pipe.

"The same pieces of notched two-by-four were used to make all the pens," said Sigurd. "It saved me the time and trouble of measuring and marking each piece of rail."

**SIGURD NIELSEN** has a genius for figuring out ways to cut farm building costs. Needing a new horse barn, he bought an old curling rink in nearby Chancellor for \$500, and sawed it up into sections with a power saw. The sections, 32 feet wide and 30 feet long, were piggybacked home on the box of a 3-ton grain truck. Each section was strengthened by four-by-six cross-pieces and jacked up to the desired height. The truck was then driven under it. For further support, two-by-six angle braces were run from the ends of the crossbeams to the sides of the truck.

Because of the width of each section and the weakness of the sidewalls, the truck had to be driven very slowly. It took the better part of a day to move a section the 7 miles to the farm. On arrival, the sections were driven right over the building site and attached to the prepared foundation. It is this native ingenuity which has enabled Sigurd to construct all his own buildings and fixtures.

The Niensens have about 8,000 acres of light rolling land where the moisture supply is less than adequate. To combat soil blowing, they use a system of strip cover cropping. Each August oats are shown in 12-foot-wide strips at intervals of 25 feet across their summerfallow. They grow both seed and commercial wheat. In addition to pigs, they run 50 head of horses and about 400 head of commercial Herefords.

This all adds up to a pretty extensive farming operation, but it wasn't handed to Sigurd on a platter. When he came to Canada from Denmark in 1929 he had only \$20 in his pocket. For a couple of years he worked as a hired hand then took over his present place as a tenant farmer. The farm had six owners. Nielsen bought the first one out in 1944 and the last one in 1948. Then he got out his tools and started rebuilding. By the looks of his machine shop and new horse barn, he intends to keep at it.

V



# The Gap Roundup

**Eighteen outfits have  
grazed this 90,000-acre  
allotment for 50 years**

**by CLIFF FAULKNER**  
Field Editor



Cattle have just left the allotment beyond the Gap and are now headed for the Maycroft cutting grounds. [Guide photo]

**C**ATTLE grazing is one of the many uses to which the grassy forest reserves along the eastern slope of the Rocky Mountains are put. In all, this huge area contains 90 grazing allotments or permits, most of them owned by grazing associations composed of smaller ranchers. Such is the 90,000-acre Gap allotment in the upper reaches of the Oldman River just north of Crow's Nest Pass. It is held by the 18 cattle outfits that comprise the 50-year-old North Fork Livestock Association. The term "Gap" refers to the narrow passage the river has cut through the lofty Livingstone Range on its way to the open prairie.

To give grasslands a chance to recover, the Alberta Forest Service has divided the Gap allotment into six units so that grazing can be rotated. Three units are grazed early in one season then left until late the following year. Because cattle

tend to overgraze low areas around watercourses, herd riders Thelma and Bob Jones spend a lot of their time in summer keeping the critters spread out over the whole area. When they're not doing this, the Joneses mend fences, kill bears and keep a sharp lookout for rustlers. Ten cows were lost to bears last year.

About mid-October the cattle are rounded up in a holding pasture inside the mountains, then driven through the Gap to a big cutting field at Maycroft Community Hall. Here, the various owners claim their animals and drive them home. Riders, and the many spectators who come out for the occasion, are able to sit down to a hot noon meal served by local women in the hall.

Asked why the Association didn't build cutting corrals at the site to save time and manpower, one of the members grinned. "That would rob the boys of all their fun." V

## A Bonus for Baling Corn Stover

**N**OBODY enjoys plowing down a tangled mass of corn stover. Everybody, it would appear, is concerned about obtaining enough bedding for their cattle. A solution to both problems is to bale the residue of the corn crop, after the grain has been harvested.

Two trends in Ontario have combined to create a shortage of bedding for livestock. The swing to grain corn has been made, in part, at the expense of coarse grains. Oat straw has been the traditional bedding used in the province.

**by PETER LEWINGTON**  
Field Editor

Coupled with the trend to corn is the increase in the number of beef and dairy cattle kept on many farms. Last winter oat straw was as expensive as good hay. Alternative sources of bedding, such as shavings and sawdust, also sell at a premium. Corn cobs are not so plentiful despite the bigger corn acreage since combines, with corn heads, leave the broken corn cobs right in the field.

Corn stover can be baled as easily as straw, and it provides an excellent source of absorbent bedding. A 100-bushel corn crop will yield some 70 to 80 bales of corn stover. While last year's long dry fall made conditions ideal for baling corn stover, winter baling is also a possibility. In fact some farmers have made a practice of gathering loads of corn stover with a forage harvester as conditions permit during winter. Prof. Don Clark, of the Engineering Science Department, O.A.C., was waiting for freeze-up to try out a recently developed corn baling attachment. The attachment, which can be fitted to conventional balers, shreds the crop. This allows baling to be completed with just one trip over the field.

Al Cocquyt, farm manager for W. A. Stewart, the Ontario Minister of Agriculture, shredded the corn stover, before baling, with a flail type machine. The neatest job is made by driving in the

**The swing to corn production has  
pushed the traditional oat straw off the market**

opposite direction to that taken by the corn picker. As the stocks were still fairly juicy the shredded material was left to dry for a day before raking. Two turns of the side rake made a good windrow for the baler and incorporated five rows of corn. V



Ontario Agriculture Minister W. A. Stewart feels corn stover has potential on corn-stock farms.



George DeBlock of Denfield has found extra custom work baling stover for Ontario corn farmers. [Guide photos]

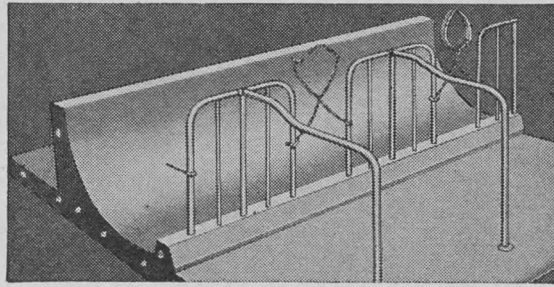


# Beatty stabling makes your money go further



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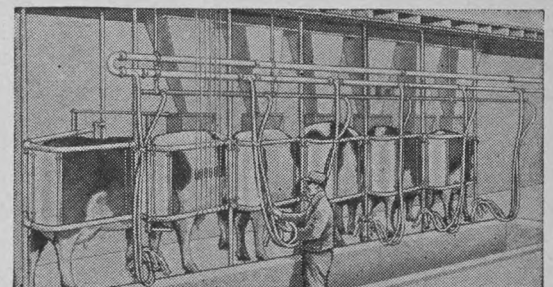
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Also available in Low Arch Stalls for smaller breed of animals.



## Beatty milking stalls

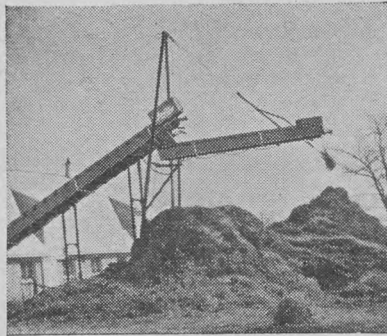
The Beatty Herringbone Stall combines the basic advantage of all pit milking parlors with unique features of its own. 12 cows in only 21' length of pit, means faster milking, an amazing saving in walking. Recommended for large herds, but many dairymen with smaller herds to whom time is very important will find Herringbone Stalls economical.

Beatty Milking Stalls also available in the walk-through or straight-in-line types.

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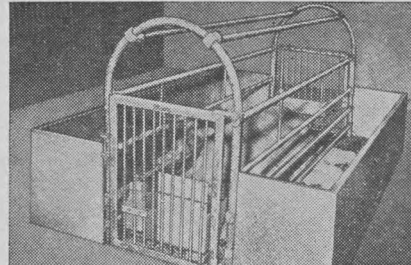
Rugged new Beatty Gutter Cleaner eliminates back-breaking shovelling forever—cleans stables automatically, in a matter of minutes. It's especially designed by Beatty barn experts for tough dependable service whether your gutter is 100 feet long or 400 feet. It has a list of exclusive features as long as your arm . . . ask your dealer to point them out today.



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# PUSH - BUTTON FARMING

*Farming has reached the push-button era, but too little thought is given to the man who pushes the button*

by **PETER LEWINGTON**

Field Editor

**M**AN is still needed in the management of the farm of the sixties. This is not intended to decry mechanization in the restrictive manner of the Luddites who smashed machinery which they felt jeopardized their jobs. The machine has largely displaced the more arduous jobs on the most productive farms. In the past two decades, productivity has shot up 50 per cent while the labor force dropped by 41 per cent. This is a prodigious achievement and indicative of the Canadian farmers' willingness to embrace change.

It is timely to give some perspective to the degree of automation in livestock enterprises. It is time to ask, "Is your push button really necessary?"

Few would care to quarrel with mechanization in the field. It has resulted in lower production costs, higher yields, better quality crops, more effective weed control and higher soil fertility. Mechanization of the farmstead lagged notably behind mechanization in the field. That gap has been closing rapidly and already there are signs that precipitous flight into mechanization is causing some misgivings.

The livestock farmer, who also produces some of his feed, spends about half his time in and around the buildings. This is obviously a fruitful area for reducing labor per unit and increasing productivity per man.

Consider buildings, which are a fairly permanent investment. Once built, they are hard to convert to new enterprises and are subject to an accelerated degree of obsolescence. They must be built as flexible and adaptable as possible.

Not all of them are. In one \$17,000 project, in which some of the latest advice in dairy housing was incorporated, no thought was given to the handling or storage of manure. The silo was placed so that silage feeding could not be mechanized. In another project, a farmer erected piecemeal additions to all four sides of his original barn. Now he has a rigid system in which the movement of cattle and materials are excessively time consuming.

## START WITH PLANNING

Push-button farming is coming. But it has to be preceded by planning. As the degree and cost of mechanization increases (notwithstanding Mr. Hays' noises to the contrary!) so will the caliber of the manager have to increase. It takes a good man to push the button.

Poultry producers have been in the forefront of the trend to mechanization of the farm buildings. Joe Hudson and his brother, Grant, of Burnbrae Farm at Lyn in eastern Ontario, manage a 100,000-hen enterprise. Feed, water, lighting, ventilation, egg gathering and manure removal have all been automated.

## SELF-DISCIPLINE NEEDED

Says Joe, "You can't get too mechanized, provided it is economic. However, mechanization requires self-discipline. You'll go broke fast if you think a machine will replace animal husbandry. No machine is any better than the man who pushes the button; the need for competent management is probably the most effective measure for controlling vertical integration from taking the farming out of the farmers' hands. No machine can tell when chicks are piling up in the brooder house or when CRD is developing.

"Since we are placing more reliance on machines now, we select them for quality, not for price."

Self-discipline? When the rush of spring field work or fall harvest demand attention, it is all too easy to let the machine replace the man. One large-scale egg producer removed his egg-gathering equipment because workers forgot to watch the birds; one farmer with a fully automated 10,000-bird house said, "If I built again I'd leave in something which makes me go through the henhouse regularly." A producer with a farm flock told me, "The time I spend walking through the pens pays me good dividends."

Turkeys are another branch of the poultry industry in which mechanization is commonplace. I am familiar with one large enterprise in which the operator rushes from one push button to the next and scarcely has time to really see the birds. Water is piped to the fields and the feed is periodically delivered by truck. No one is around to pick up the sick or even the dead birds.

In direct contrast to this is the turkey farm of Tom Mathews near Mono Mills. Mathews remains the master and automation is the servant. His output should reach 85,000 birds this year. This is made possible by only handling material which will flow or can be economically dispensed by machine. The key to Mathews' success is what Joe Hudson has described as "self-discipline." Mathews or his wife Thea regularly check every detail of the big brooder houses, day and night. He makes a point of walking through his turkey ranges every 2 hours during summer. Lame or

sick birds are promptly removed to a hospital pen and dead birds are burned. Mechanization enables Mathews to produce competitively. Management will keep him in the business.

## MANAGEMENT KEY TO PROFITS

M. L. Woods, Maple Leaf Mills' broiler specialist, says: "One of the striking facts of the broiler industry is the great variation in profit returns. One grower will finance his own expansion from profits while another will be forced to suspend operations because of lack of profit. The two big factors affecting these profits are efficiency of buildings and equipment, and management. Successful management exists when a poultryman recognizes problems, large or small, and then takes positive action."

Beef feedlots are increasing in size and numbers. One such enterprise I found to be completely mechanized. I also found a market steer dead from bloat. As one good feeder put it, "We just can't afford losses; a sick beast is losing money even if it doesn't die. It's the daily gain at profitable levels that keeps us in the business. We don't have to, but every beast is looked over twice a day."

Nor should we underestimate the intelligence of the animal in circumventing even the most ingenious machine. At one herringbone parlor installation everything was controlled by the busy operator in the recessed area between the rows of cows. Two cows, however, could beat the system. One had learned how to rotate the auger with her tongue while the second pulled the rope which activated the feed dispenser and got 2½ pounds of extra feed every time for very little effort.

Size of operation causes a loss in the personal touch and George Suffel of Cardinal, Ont., recalls, a trifle nostalgically, the time when he knew every ear tag number in the herd. When you know details like that it's unlikely that calving dates and caked udders get overlooked.

Is your push button really necessary? In some cases, certainly not. Some farmers try to keep up with the Joneses and become the innovators of their areas. "Everyone," one farmer proudly told me, "is going to know my name!" In another instance a dairyman had switched to an expensive pipeline milker for his stanchion barn. Time studies by an agricultural engineer showed that he saved himself 15 minutes a day. Fifty dollars spent on a silage cart would have saved 45 minutes daily—but what is the prestige value of a silage cart?

## SHARP PENCIL FOR BIG FARMS

Dr. Max McLean, Manager of Eastern Breeders A.I. stud, says, "Management methods which worked yesterday in a small herd just won't work as size increases. A sharp pencil for keeping good breeding records is more valuable than a sharp hypodermic for remedial action. It's quite easy to boost production and more than offset this gain by late breeding and extended calving intervals. Sometimes there's money to be made just sitting on the fence observing the cattle. That gutter cleaner is a wonderful thing, but it won't tell you which cow is in heat!"

Hogs are also getting automated. One farmer in an over-simplification, with a good grain of truth in it, told me, "If a pig fails to come up for its feed I get worried. If it doesn't come up for the following feed I knock it on the head." A number of fully automatic hog finishing barns are now coming into operation. In busy periods there will be the temptation to miss a visit to the barn, today, tomorrow, even a third day.

Engineers at the O.A.C. tell me that a solanoid near the automatic limited feeder would be heated by the presence of the hog, and the number of hogs coming up to feed could be recorded on a graph. Eighty per cent of the cost of raising a hog lies in the feed and yet hogs are becoming super mechanized.

The Joneses are going to have to look to their laurels if their neighbors merely check their solanoid-operated graphs when asked how many hogs are on feed. Ask them soon. They may not be with the solvent too long.



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Archie Cromwell unloads straw and chaff into feed bunk. Mixer-wagon then serves concentrate on top. [Guide photos]

# Farm Feedlot Goes Modern

*Farm feedlots are taking on a new look across the West. Labor-saving equipment and long-lasting materials make the job easier*

THE cattle feedlot is becoming a permanent part of the Western grain farm. Few farm feedlots are as elaborate as this new one at Fulton Farms, Indus, Alta., but many operators are taking a good look at machines and long-lasting materials which will save labor and repair costs. New lots are being laid out with mechanized feeding and cleaning in mind.

At the Fulton lot feed bunks are of pre-cast concrete sections set up on short lengths of hexagonal concrete pipe. They can be easily moved at any time if a different layout is required. Having the bunks raised so the air can move freely under them helps to dry out the area where the feeding animals stand. Each pre-cast section has a hole in the bottom for drainage and another in the center of the inner side to carry the pipe posts which support an adjustable cable fence. Tension is maintained on the cables by old cultivator springs attached at one end of each fence.

Like the feed bunks, cable fences are more durable than wooden ones. They give when cattle lean against them and they can't be chewed.

The heart of the Fulton feedlot is a modern mill where the various ration components flow into a mixer-wagon at the pull of a lever. While it is being loaded, the wagon sits on a special dial scale which measures the amount of each component that goes in. Accurate records are a must when profit margins are narrow. As the wagon is driven to the feedlot, paddle blades give the ration of pellets, grain, salt and minerals, a thorough mixing. The 36-foot-wide alleys in front of the bunks allow ample room for maneuvering or for snow removal. The Fultons find these a big improvement over the 10-foot alleys of their old lot.

V

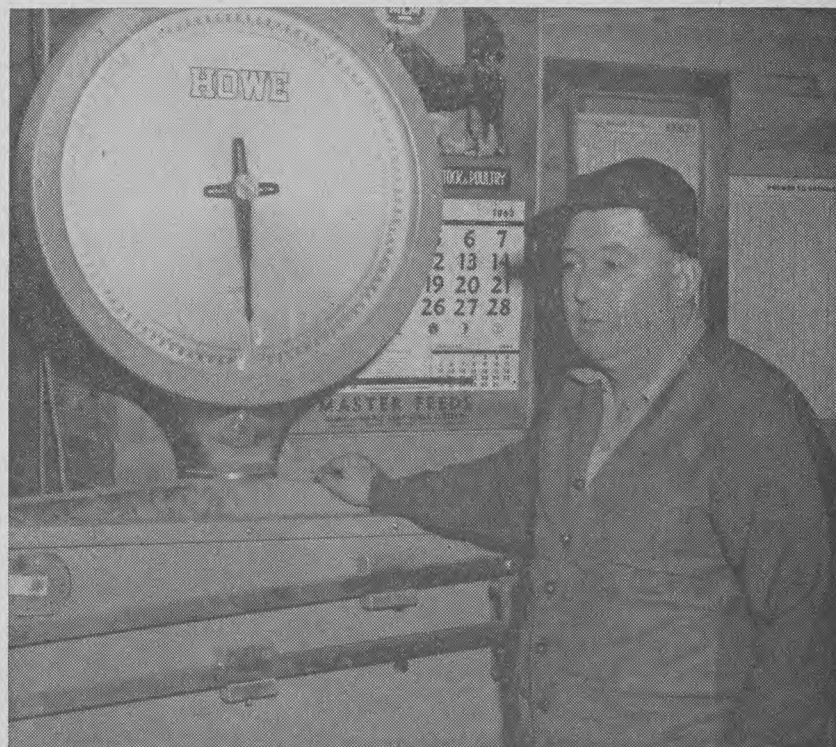
by

**CLIFF  
FAULKNER**

Field Editor



Gus Petersen experiments with new cattle oiler.



Bob Fulton who now manages the farm, beside the dial scale in the feed mill.





President A. M. Runciman (left) discussing farm policy with U.G.G. delegates.

# Who Says U.G.G. Farmers Are Different?

It's true that at this year's Annual Meeting they voted *against* increasing the scale of patronage dividends. They decided to spend the extra money to expand and improve United Grain Growers' services and help *all* farmers in the West.

They set a policy against "poor-mouthing." Against the concept that city people should feel *sorry* for farmers because they have problems. The long-run hope of this approach depends on farmers being unsuccessful. At U.G.G. meetings, farmers are more concerned with things their company can do to show the Canadian public *their stake* in a healthy, efficient and — yes — prosperous agriculture.

They feel it's important that governments and housewives *understand* that anytime a farmer is hindered from producing grain and meat efficiently, the cost of food will be higher than it needs to be. Carefully thought-out briefs and vigorous heads-up representation will do the job.

Are these 56,000 U.G.G. owners so different?

Maybe they act with such a strong sense of responsibility because they know they are in full control. Only farmers can buy U.G.G.'s membership shares. You'll find only farmers at U.G.G. Local Board meetings. (They get one vote each.) Only farmers can be elected as delegates to the Annual Meeting, U.G.G.'s parliament. Here these farmer-delegates decide U.G.G. policy and choose the directors who will carry out that policy.

Wise decisions by your neighbors — the farmers who control United Grain Growers — can mean plenty of important benefits for all farmers. They speak for you.

There are some traditions to guide them. For example, when farmers first started U.G.G. back in 1906, they aimed to correct certain abuses in grading, weighing and pricing at country elevators. First they asked for government operation of some elevators. It was tried, but didn't work.

In 1912, U.G.G. farmers started operating their own elevators. Nobody thought farmers could succeed in that business. But

U.G.G.'s elevator system has been a success right from the first day. Honest weights, fair grades, top prices were wanted by farmers.

Prices went up, grading became fairer, and weights more honest at all the other elevators, too.

That was when U.G.G. farmers learned that the best thing they can do to help themselves is to build effective Farmers' Company competition in the grain business. They know all farmers benefit — even when U.G.G. competes with other co-operatives.

And so the farmers who own and control United Grain Growers are carefully expanding their Company. They're building the most modern elevators in Canada at points like Brandon, Moose Jaw, Biggar, Rosetown, Warner, Bentley, Manning...

Haul to the Farmers' Company that's on the move. You will keep it strong and prepared to do the things that a big successful company can do to help farmers more.

And if you've a mind to join 56,000 farmers who work to solve their own problems — and yours — you're welcome to become a member of United Grain Growers. Total membership went up by 769 farmers in 1963. All it takes is being a farmer and a desire to get things done the way you want them done.



**The Farmers' Company**



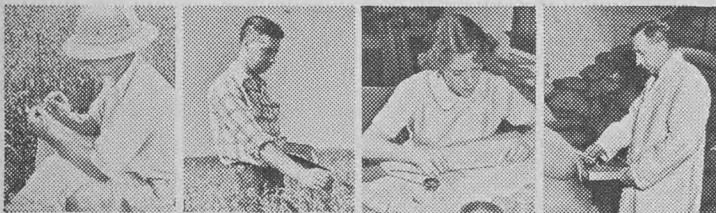
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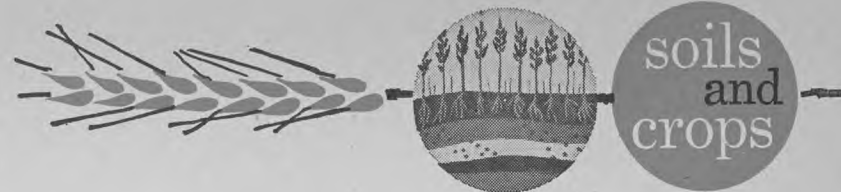
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## CORN and HOGS— an Unending Cycle?



[Guide photo]

The unending corn-hog cycle! In the background is the silo for storing high moisture corn which is fed to hogs in the converted barn. The liquid manure is spread on the corn stover to fertilize the next grain corn crop.

Continuous corn settles many problems—and raises new ones. Much of the current evidence is contradictory and the ultimate in specialized agriculture must still be regarded as in a state of flux.

- Corn is a specialized crop which can be mechanized throughout the complete growing and feeding cycle. Traditional crop rotations are similar to going round in circles, some observers claim; it gets you nowhere.

- Western corn rootworm, first reported causing serious problems in Nebraska, is now a serious threat to corn in parts of five other states—southern South Dakota, southern Minnesota, western Iowa, northern Kansas and northwestern Missouri. Scientists say concern over western corn rootworm stems from its resistance to commonly used soil insecticides aldrin and heptachlor. The following measures may help minimize losses: rotate badly infested fields to crops other than corn; avoid late planting dates; apply certain phosphate insecticides such as granular diazinon, phorate, stabilized parathion or compound 4072, properly.

- Liquid manure handling can be completely mechanized. Two drawbacks are the initial expense of a concrete storage tank and the problem of inlet freezing during the winter months.

- 1963 provided some classic examples of residual herbicide damage to susceptible crops. Continuous corn circumvents this problem but a farmer could get into an awkward position if his farming becomes inflexible; he could be driven to growing corn even though changing circumstances demanded a change in cropping.

- Liquid manure storage tanks should not be confused with lagoons. Storage tanks are designed to conserve fertility. Lagoons are larger and shallower and intended for a "flush and forget it" system. Lack of capacity, pollution and odor make lagoons hard to forget.

**F**ARMING is variously described as a way of life or a business, but with Murray Selves it has become a fine art. Selves on his Perth County farm in Ontario has his share of problems but he is working toward an unending specialized and mechanized corn-hog cycle. His entire 120 acres are devoted to continuous corn and some additional high moisture corn is purchased at harvest time so that he can keep 600 hogs on feed all the time. This means a lot of manure; manure handling is the final link in the cycle

to be mechanized and 100 acres can now be covered in this way.

Selves has converted an old building into a two-deck hog barn. At one end of the barn a concrete storage tank has been built—incidentally of lighter than desired strength. The pens on the lower floor drain directly into the tank while the long narrow pens on the upper floor all drain to a central gutter, where a 4-inch auger is used to convey the sloppy manure to the tank.

(Please turn to page 24)





# BIG POWER WESTERN STYLE!

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Any two units can be duplex-hitched up to widths of thirty feet. For the big power farmer, this duplex hitch teams up a pair of 225 disc harrows to give that tillage combination that makes your toughest jobs easy. For complete details visit your Cockshutt dealer today.

**TRADE NOW!** Earn money now on your idle equipment or cash down payment. Your Cockshutt dealer will pay you in advance, at the rate of 6% and you get your interest cheque right away—just as soon as your deal is approved. You have the use of this money—while you are waiting for delivery of your new equipment—and your purchase price is guaranteed. See your nearest Cockshutt dealer today for further details. He is prepared to give you the best trade in the industry.

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(Continued from page 22)

Selves has some persuasive arguments to justify his new system:

- Conventional manure handling methods are wasteful. Vast amounts of fertility leach away; not only does this loss cause pollution of our streams but we have to buy back the fertility.

- Conventional methods are too laborious.

- Liquid storage of manure reduces both the odor and fly problems which plague many hog operations.

- Continuous corn means that no straw bedding is available; in any event no bedding can be used with a limited, floor feeding system.

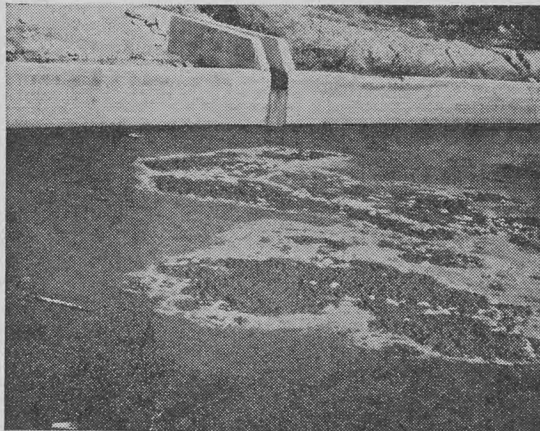
- Liquid handling completes the feed-fertility cycle.

The initial outlay for the tank is a big one. It has to have adequate capacity as it is only possible to

spread the liquid before planting and after harvest. Selves also purchased a used trailer with a 1,000-gallon tank for \$200 for spreading. The trailer has to be ruggedly built and either have big 10 x 28 tires or duals. The cost of the specially designed pump, foot valve and pipes was a further \$160.

The solids in the tank are continuously being broken down by bacterial action. Selves drains off what solids he can without causing the pipes to plug. Some 20 loads can be spread between chores. Two loads, or a total of one ton per acre are being spread but this amount may be modified when analyzed.

Experience has shown that the tank has to be reinforced, a frost-free inlet is required and 2-inch flexible, non-plastic, hose is necessary for drawing off the liquid.—P.L.



[Guide photos

Storage tanks are costly because they must be big. Capacity should be 1 gal. per hog per day.

The tractor PTO-driven pump is used to both fill and empty the 1,000-gal. trailer-mounted tank. Here, Murray Selves is attaching hose prior to loading the tank and spreading manure.



## Swath Structure Important

SIZE, shape, and structure of the grain swath are important in proper curing of grain and straw and are equally important in assuring a clean pickup job by the combine, according to Paige Harrison, director of Agriculture Machinery Administration, Saskatchewan Dept. of Agriculture.

Research in various parts of the world, and field and laboratory tests by the agriculture machinery administration (AMA) have provided valuable information in this regard, says Mr. Harrison.

As a rule stubble height in swathing should be determined by the height of the crop. Maximum stubble height should not be more than 10 inches and minimum height 6 inches, he said.

Proper placing of the straw on the stubble depends on swather adjust-

ments including, tilt of table, speed of canvas, and adjustments of shrouds, aprons and rods controlling delivery and angle of swath.

All of these adjustments may not be found on any one swather, and for this reason it is important that farmers study the type of swath made by various machines, machine adjustments available, and swathing conditions most frequently met on his farm.

The AMA swather test reports contain information that will guide you in selecting a machine best suited to meet swathing conditions on the farm.

Research has shown that swaths are dried by evaporation from the exposed surface of the swath and that the amount of surface exposed

(Please turn to page 26)



# PROOF POSITIVE!



## MERGAMMA LIQUID could increase your crop yield by 22.5%

**Experts estimate that seed treating could increase profits on an average of \$437.50 per farm. Too many acres of wheat, oats, barley and flax are seeded untreated every year with the result that too many farmers are not getting the yields and profits they should have. This is profit you cannot ignore — profit which can be yours through proper seed treatment.**

### RECOGNIZE THE PROBLEM

Uneven stands of crop, low yield areas in a field, poor or spotty germination, could be signs of damage caused by wireworms and/or seed-borne disease. These pests will reduce your crop's full potential value and profit. Do you recall any of your fields showing these signs in previous years? If so, be prepared this spring, treat your seed and avoid crop losses due to disease and wireworms. If not, why take a chance? Treat your seed and be sure!



### SEED DRESSINGS AND THEIR VALUE

Farmers annually lose an estimated 60 to 70 million dollars worth of cereal crops because of wireworms and disease. Time and again, extensive tests made across Canada prove beyond doubt the value of treating seed. These tests show that seed dressings can increase yields by 5 bushels per acre or more by killing wireworms and controlling disease. Often the seed in the ground is at a great disadvantage because the soil at planting time is cold and wet — other times too dry — for seed to germinate. Under such conditions seed dressings will give much needed protection with the result that a good healthy stand may be produced in spite of poor growing conditions,

### THE INVESTMENT

For only a few cents per acre, you can be insured against losses caused by wireworms and disease — an investment in seed dressings is one which will provide you with greater yields and better profits at harvest time! "Mergamma" Liquid and "Agrosol" are test-proven products which have been delivering extra profits through greater yields to farmers for several years. Both products are made in western Canada and fully adapted to Canadian conditions. "Agrosol" disinfects the seed before planting. Although seed grain may appear free from disease, many organisms may be present on the surface of the seed. If not controlled these organisms could infect the plant produced with smuts and other fungus diseases. "Agrosol" is a disinfectant and destroys these organisms carried on the seed surface.

"Agrosol" protects the seed after planting. The soil into which seed is planted is teeming with countless living organisms. Many of these are beneficial, but some are harmful. Such organisms may cause the seeds to rot before they germinate. Other organisms may attack the small seedlings causing seedling blights. Properly treated seed, carrying a uniform coating of "Agrosol" is protected against attack by disease organisms. If the seeds and the seedlings are protected against attack, emergence is earlier, more uniform and growth is more vigorous.

"Mergamma" Liquid contains a combination of liquid mercury and heptachlor, thus giving dual protection against seed-borne diseases and wireworms. Millions of acres in Western Canada are heavily infested

with wireworms. Large bare or thin patches in a field are probably indications of wireworms. Close examination will show that the germ of the seed may have been eaten before it could germinate.

The seed may have germinated before attack by wireworms. In this case the young seedling will have a dry, withered centre leaf or be completely dead. Excavation will reveal the chewed tissues of the seedling just below the soil surface. This young seedling may die from the shredding or from disease organisms which enter the wound. If it recovers, it will probably be ten days to two weeks later

in maturity thus giving rise to "green berries" in the grain sample at time of harvest.

"Agrosol" and "Mergamma" Liquid are not substitutes for good seed, but they will give good seed a chance to do its best. When it is necessary to use damaged seed, (for example, flax seed which is often cracked or damaged in threshing) the protection offered by seed dressings is more important than ever. Give your seed the extra help and protection which pays off in heavier stands and better profits. Treat your seed with "Agrosol" and "Mergamma" Liquid — 13 years proven best across the West.



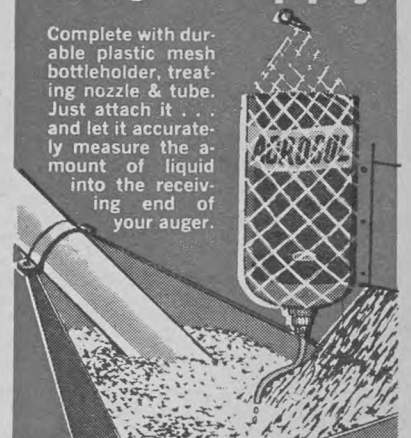
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(Continued from page 24)

has a direct bearing on the rate of drying.

"A light swath which is scattered in a fairly thin layer will dry quickly because a good portion of the crop is exposed to the air," Mr. Harrison said. "This type of swath is also easily soaked by a light rain or dampened by a heavy dew."

Since very few of the heads are protected from moisture, grain may be severely bleached in a light swath.

Pickup losses may also be greater with this type of swath.

If the swath is narrow and thick, only the surface may be dampened by showers. Rain must be heavy and prolonged to wet through a well constructed swath.

"A narrow swath offers more protection to grain in the interior of the swath, particularly from light rain," Mr. Harrison pointed out, "but once it has become wet the moisture in the center of the swath must move to the exposed outer layer before it

can be evaporated. This is a slow process and the drying period may be lengthy."

The most desirable type of swath is in a range between the two. "It should permit rapid drying, and at the same time protect the maximum amount of grain from showers and dew," Mr. Harrison said.

Swaths produced by present swathers generally fall into four types; parallel, fantail, angled parallel, and herringbone.

The straw in parallel swaths lies in the direction of travel of the swather. This swath has a tendency

to fall through the stubble and lie close to the ground. Because of this, and since the straw is parallel to the pickup teeth, losses may be severe.

Laying a parallel swath may be avoided by changing canvas speed or table angle or adjusting shields or shroud-rods that direct the swath on to the stubble.

"Angled parallel" is usually the most satisfactory type of swath and is generally the type laid by a swather with one canvas (end delivery).

Laying straw at an extreme angle to the direction of travel should be avoided. The "thatched" effect may be lost and heads bunched at the side of the swath. This concentrates weight on one side, heads may settle, raising the butts which may be caught by the wind.

Another disadvantage of sharply angled swath is common. This type of swath tends to feed on one side of the machine putting an uneven load on one side of the cylinder and chaffer.

Reducing the tilt angle of the table platform usually reduces the angle of straw that is placed in the swath.

The herringbone type is often formed to the center delivery swather. Unless the straw is interwoven to form a durable swath the heads cause a sag to develop in the center of the swath. This sag, or trough, may create a problem during a wet fall by trapping instead of draining off rain.

Since the table angle on the self-propelled swather often cannot be changed, the operator must use less effective adjustments such as varying canvas speed or forward travel speed to improve swath.

The fantail is the reverse of the herringbone. It is sometimes found where tall crops are cut with the center delivery machine. In this case the butts are interlocked in the center with the heads fanned over the top of the swath. It is subject to wind damage and heads have a tendency to hang over edge of swath in contact with the ground. However, it is easy to pick up and the heads dry out quickly after becoming wet, said Mr. Harrison.

## Stubble Makes Good Forage Seedbed

ACCORDING to M. R. Kilcher, of the Swift Current Experimental Farm, Sask., an excellent seedbed for seeding grasses and legumes can be found in standing stubble fields which have been undisturbed by cultivation.

The soil under the stubble is uniformly firm but still not packed or crusty, and uniform seeding at a controllable depth can usually be managed on stubble land he says.

Forage crop seeded after mid-October will germinate and emerge in the spring while moisture is present, allowing new plants the benefit of a longer growing season.

He points out however that stubble fields should only be seeded with double disc drills, since they can cut through scattered straw and place seed in the firm soil. Stubble

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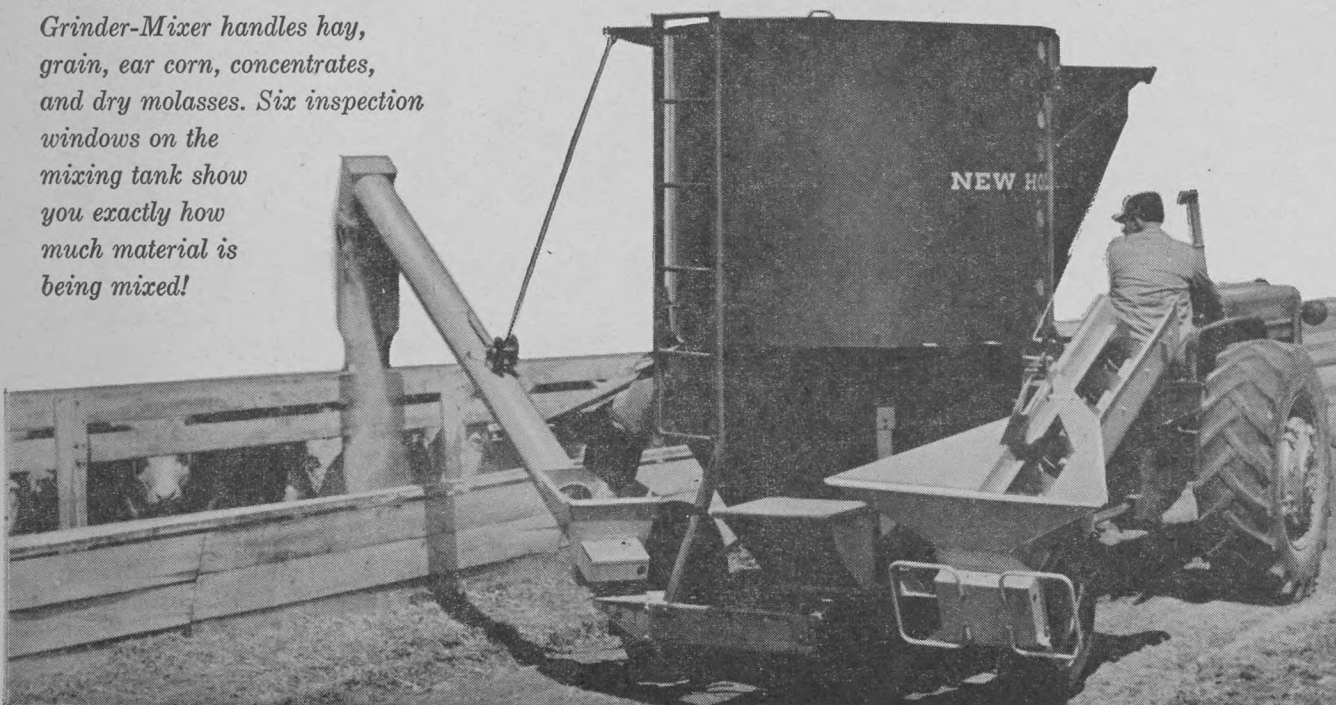
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## SOILS AND CROPS

is also left standing to trap snow for the following year.

Mr. Kilcher recommends most of the commonly grown forage crops such as crested wheatgrass, Russian wild ryegrass, brome grass, intermediate wheatgrass and alfalfa can be seeded during the late fall. However, sweet clover is too easily injured or killed by early spring frosts to recommend planting in the late fall. V

## Seed Treatment Important

**M**ODERN seed dressings, whether they are dusts or liquids, are easily handled and their application to seed grains is common farming practice. The methods by which grain has been treated have been many and varied, the batch mixer being superseded by the continuous type treater of one form or other.

A continuous type treater must accomplish three things, says M. E. Dodds of the Experimental Farm, Swift Current. First, it must meter a uniform flow of grain; second, it must dispense the fungicide at the correct application rate corresponding to the rate of grain flow; and third, it must mix the grain and fungicide to obtain as uniform a distribution of the chemical as possible.

Grain flow may be regulated in many ways. If seed is treated immediately following seed cleaning, the cleaning units may be used to maintain a steady, known rate of grain flow. Another method is to make a hopper with an adjustable opening in the side or in the bottom and calibrate the opening for different flow rates for different grains. A vertical hole 2 inches in diameter will permit a wheat flow of about 1/2 bushel per minute and a horizontal hole of the same size will allow 1 1/2 bushels per minute to pass. With the grain flowing at a known rate, the fungicide dispenser may be adjusted so that the chemical is applied at the correct rate. The subsequent mixing should assure that the fungicide is spread as uniformly as possible. V

## Control Brush, Increase Grazing

**B**EST control of small brush is achieved by thorough cultivation of the pasture for a full season and then seeding with a mixture of brome grass and alfalfa, says R. N. McIver, agronomist with the federal experimental farm at Indian Head, Sask.

Where this is not possible, he suggests treating brush-covered areas with 2,4-D, using a rotary mower first if necessary, and then seeding with the brome-alfalfa mixture.

At Indian Head, applications of 2,4-D at the rate of 2 pounds per acre 1 year and 1 pound an acre the next year gave fair control of western snowberry, wolf willow and aspen poplar.

In the experiment, native grass yield was increased from 265 to

1,200 pounds an acre and when brome grass and alfalfa were sown into the sod, only a small percentage of brush plants became established.

Use of a rotary mower alone did not provide satisfactory results, Mr. McIver reports. The number of western snowberry and aspen poplar shoots increased and seeding with the brome-alfalfa mixture was almost a total failure.

However, mowing and the application of 1 pound of 2,4-D per acre on two successive years gave fair control of the three plants, he adds.

Grass yield was increased from 150 to 1,000 pounds an acre and this was boosted to 1,500 pounds with post-treatment seeding with brome and alfalfa.

Aside from greater grass yields, Mr. McIver points out, brush control permits livestock to more readily graze the area. V

## Breaking Yield Barriers

**T**WO hundred bushels of corn or 80 bushels of soybeans to the acre. These are in prospect if results of preliminary tests, at OAC, Guelph, are sustained. The first essential is a weed-free environment or creation of an ideal situation where the crop does not have to compete with weeds for available moisture, sunlight and fertility.

The second key factor which may result in breaking down barriers to increased yields is also a chemical one. Growth regulators have been devised. Plants can be sprayed with a growth regulator which will inhibit growth of the plant and increase the early setting of seed. Leafier and growthier plants cannot capture the optimum of the sun's energy for development of the seeds. Plants have traditionally been altered genetically, now the prospect is for re-designing plants chemically.—P.L. V

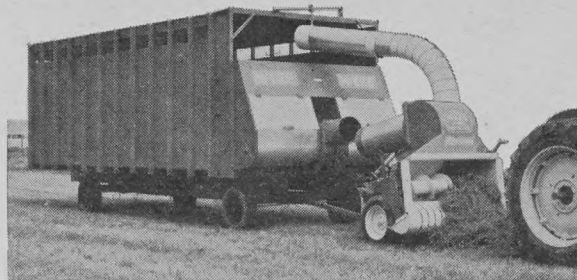
## Wheatgrass Best in Alkali Soils

**T**ALL wheatgrass was the most suitable grass tested last year at the Lethbridge Research Station for alkaline conditions. It germinates in high salt concentrations and persists under wet soil conditions, said R. W.

(Please turn to page 30)



# McKEE GRASSLAND HARVESTERS ARE THE BEST



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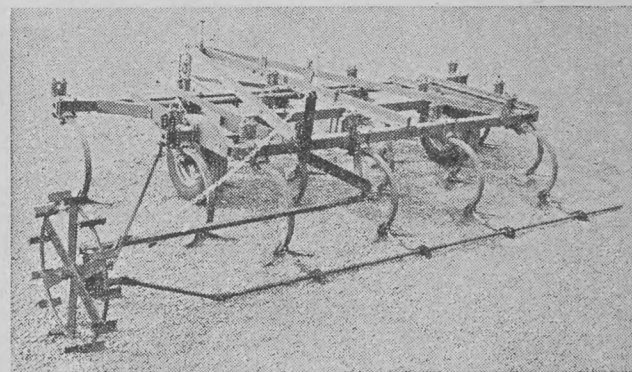
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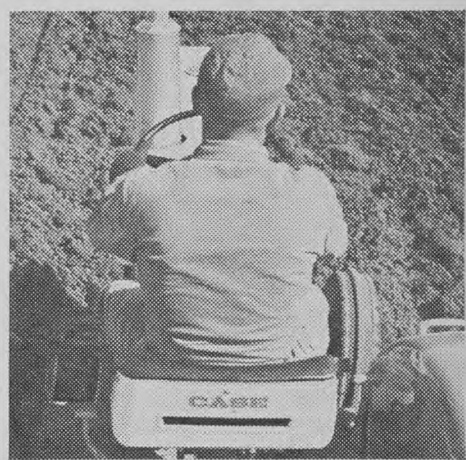
Year after year in official fuel economy tests Case Dynaclone Diesel engines prove supreme. In many instances bigger tractors such

as the mighty Case 930 cost even less to operate than other smaller competitive tractors. And you get this kind of economy right down the Case line in both gas and diesel.



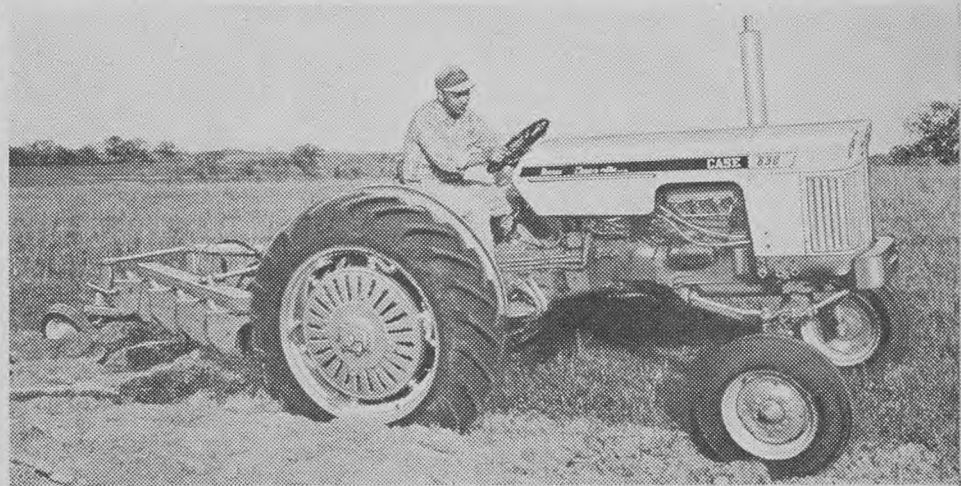
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## SOILS AND CROPS

Peake, head of the forage crops section. Reed canary grass withstood long periods of flooding but not as much salinity as tall wheatgrass. Once established, it proved valuable for both hay and pasture. Tall fescue is easier to establish on alkali soils than reed canary grass but it is also subject to more winter injury. Slender wheatgrass is tolerant of moderate alkali conditions but persists only a few years. Neither orchard grass nor creeping red fescue survive wet, alkali conditions. Of the legumes tested, sweet clover withstood some alkali once established. Alsike clover stood up to considerable flooding but very little alkali while alfalfa wasn't tolerant of either.

Seeding may be done in spring or fall, said Peake. Fall seeding is necessary where land is wet until mid-season. Early fall seeding should be completed by the middle of September. Late fall or dormant seeding can be done just before freeze-up, the seed germinating the following spring. V

### Don't Over-Irrigate

SOIL moisture should be maintained above the 50 per cent level of available moisture during the active crop growth period, says K. K.

Krogman, soil specialist at the Lethbridge Research Station. This means irrigation should be applied when the soil has dried to the half-way point between field capacity and the wilting point.

In 1960, 1961, and 1962 some common irrigated crops at the station were irrigated when the available soil moisture was 25, 50, and 75 per cent. Average yields per acre at the three levels for five crops were as follows: Second-year alfalfa — 4.4 tons, 5.4 tons, and 5.3 tons; sugar beets—16.0 tons, 20.3 tons, and 20.9 tons; potatoes—10.5 tons, 14.4 tons, and 16.2 tons; soft wheat — 33 bushels, 78 bushels, and 79 bushels; and barley—52 bushels, 70 bushels, and 70 bushels.

Except for potatoes, the maximum yields were reached with the middle irrigation level. Potatoes gave a slightly higher yield with the highest irrigation level. Total water used (irrigation plus rainfall) at the medium irrigation level ranged from about 19 inches for barley to about 29 inches for alfalfa. At the highest level of irrigation, crop use was 2 to 5 inches greater although yields were not correspondingly increased. The most efficient use of water also occurred at the middle level of irrigation, he said. V

## May Prevent Urinary Calculi

HOW to supply phosphorus to livestock without increasing the already abundant calcium has been a problem of L. M. Bezeau, animal nutritionist at the Research Station, Lethbridge.

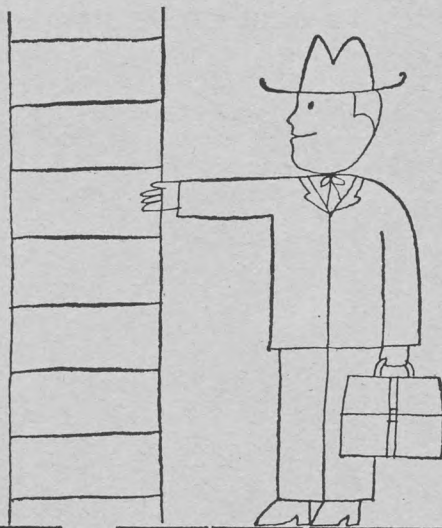
Prairie soil and plant material is high in calcium. When bonemeal or dicalcium phosphates is fed, more calcium is added and the calcium-phosphorus ratio thrown out of balance. In his nutrition experiments, Mr. Bezeau tried monosodium phosphate as a supplement but it is too expensive for commercial use and the sodium is of no value.

Now, a compound has appeared that appears to provide the advantages he is looking for. It is diammonium phosphate, a product that contains both nitrogen and phosphorus. It is closely related, says Mr. Bezeau, to the monoammonium phosphate of 11-48-0 fertilizer. The fertilizer, however, is too high in fluorine to be considered for livestock use.

Mr. Bezeau is particularly interested in use of diammonium phosphate in the course of his urinary calculi research. He found recently that a low mineral ration fed to the cow has a definite influence on ap-

pearance of stones in the calf. Of two sets of new-born calves, stones were found in those whose dams had received the normal ration, while no stones were found in the calves from cows on reduced but adequate mineral.

Diammonium phosphate, says Mr. Bezeau, not only offers an opportunity of cutting down on the calcium content of the ration, but it can supply also some of the protein required. V



Need someone  
to hold the  
ladder?

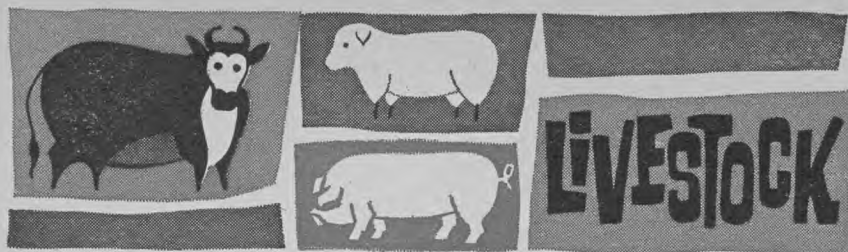
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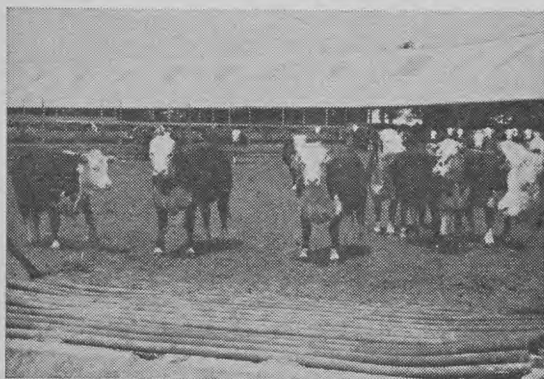






## 1,500 Pounds of Beef per Acre

*Complete records on this feedlot reveal the cost of producing each pound of beef was 18.5 cents*



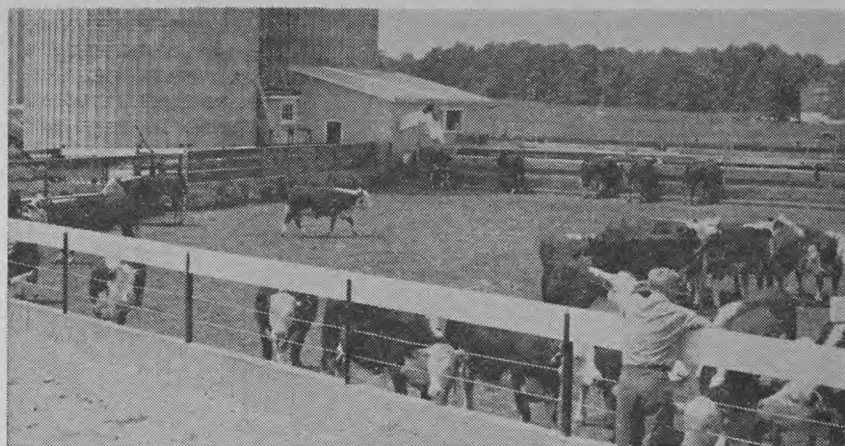
Open-front barn extends across back of feedlot to provide shelter. Texas gate in foreground makes entry to the feedlot more convenient.

**W**HEN Fred Cohoe set up a feedlot on his farm at Burgessville, Ont., 2 years ago it wasn't because he particularly liked beef cattle. He had no more preference for them than he had for feeding turkeys or hogs or any other kind of livestock. What he really wanted was a way to utilize 135 acres of his farm. According to the best calculations he could make, he could grow corn on those 135 acres,

feed it to steers, and make more profit than by any other means available.

After his first full year of feeding, and despite the fact that it was a year when feeder cattle prices were high and fat cattle prices were low, he is still convinced that beef cattle are as good a cash crop as one can produce.

No wonder! In setting up the feedlot (which is named Gateway) (Please turn to next page)



The three silos in the Cohoe feedlot are grouped. Auger-feeder extends through the feed room and out into the feed bunks that separate the two yards.

### Gateway Ranches Limited

508 Heifers purchased October 1962. Average wt. 377 lb. Total wt. 191,569 lb.

118 Steers purchased June 1963. Average wt. 729 lb. Total wt. 85,990 lb.

Average gain of heifers 415.4 lb. Total gain 211,031 lb.

Average gain of steers 271.2 lb. Total gain 32,000 lb.

Weighted daily gain using Western weight in, and marketplace weight out:

Heifers, 1.66 lb. Steers, 2.1 lb.

Total gain for year's feeding, 243,031 lb.

Cost in cents of each pound of gain produced:

.76 Maintenance	.80 Sales Cost, Freight, etc.
1.74 Bank Interest	.24 Heat and Hydro
.10 Fuel	.28 Insurance
.91 Bedding	.41 Tax Estimate
1.40 Labor	.32 Office and Legal
.06 Veterinarian	.05 Research
.29 Drugs and Medication	2.00 Interest on invested capital, and depreciation
9.10 Feed	
<b>Total</b>	<b>18.46 cents</b>

Feed Used	Value of Feed	Feed Used	Value of Feed
Silage, 2,600 tons	\$ 8,475.00	Protein Supp. 103 tons	\$10,600.00
High Moisture Corn, 4,000 bu.	2,520.00	Additives	120.00
		Processing	350.00

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**MIRACLE**

**ALBERTA:**



Vincent Soetaert, St. Albert, Alta., looks over some of his "Miracle"-fed hogs. His building has slatted floors and pit system for manure disposal.

Vincent Soetaert feeds "Miracle" complete feeds in his modern hog-feeding operation: "Miracle" Starter, Grower and Finisher. Future plans are for expansion from present capacity of 600 hogs, which he buys in as feeders from other farmers. He feels that "Miracle" quality and service have contributed greatly to his successful operation.





## Here's how Niagara seed dressings can help you get greater yield and higher grade in 1964

Only seed protected against smut, root rot, seedling blight and wireworms will give you top yields. ☐ Protect your seed this year. At a cost of less than 10c per acre, you can increase your yield by as much as 3 bushels (worth more than \$3.00) an acre. And the crop you get from treated seed often grades higher. ☐ What's more, you save on seed because you may need to use only two-thirds as much treated seed in areas where you have formerly had to seed heavily to get even an average yield! ☐ Make 1964 your year to let Niagara help you get cleaner crops, higher yield, and better grades!



Niagara has three liquid seed protectants to help you in 1964—Gallotox, for protection against smut, root rots and seedling blight . . . Heptadrin, high-concentrate wireworm killer . . . and Gallodual for both disease and wireworms. ☐ Superior wetting agents in all three crawl over the seed to help you get higher yields and better grades. (If you prefer powders, Niagara Brand offers Puraseed and Puradrin.)

Niagara Seed Dressings are SAFE! Because they do not give off harmful mercury fumes. FAST! They work immediately and can be used on seed with or without storage. Treat and sow right away if you wish. PLEASANT! No stinky fumes. EASY! Especially with a Niamist 200.



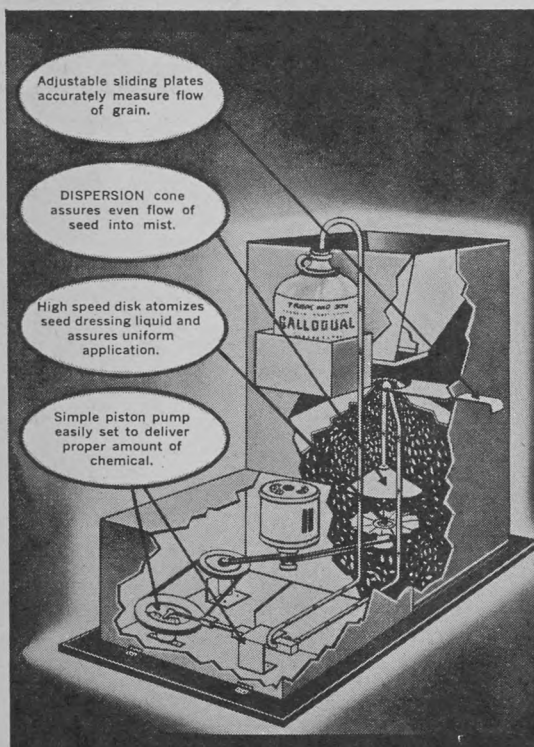
Seed treated by  
Niamist 200  
Perfect coverage



Seed treated by  
conventional methods  
Harmful overdose



Seed treated by  
conventional methods  
Missed completely



### And read about this special discount offer on Niagara's on-the-farm-seed-treater—

**The Niamist 200** This is the on-the-farm seed treater that **treats each seed** individually as it drops through the mist. Guess work is eliminated. Every seed gets the right amount of chemical—no overdosed or untreated kernels—so that **you** get ideal germination rates. And now Niagara offers a special discount rate on the Niamist 200. The Niamist is regularly priced at \$119.50 (with motor). Niagara Brand offers you a discount of \$2.00 per gallon of chemical for the first 5 gallons of Niagara Brand Seed Dressing you buy . . . \$1.00 per gallon on the next 10 gallons . . . for a maximum discount of \$20. Your chance to buy the marvellous Niamist 200 for as little as \$99.50.

# Niagara

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Please send me the items I have checked:

More information about the Niamist 200 ☐

A Farmer's Guide to Proper Seed Treating Practices (booklet) ☐

The name of my nearest Niagara dealer ☐

NAME .....

ADDRESS .....

Ranches Ltd.) he built three silos measuring 24 feet by 70 feet each. The entire 135 acres of land was seeded to corn and some of this was harvested as silage, the remainder as high moisture grain.

In October 1962, once the corn was harvested, he bought 508 heifers averaging 377 lb. weight. By June 1963 these had gone to market and he bought 118 more steers averaging 729 lb. each. By the time the steers were sold the silos were empty. The crop from 135 acres of corn land had been sold. Here were the results:

Total gain made by the cattle was 243,031 lb. The amount of beef produced per acre was 1,500 lb. The cost of feed eaten, per pound of gain, was 9.10 cents. (Cost of home-grown feed was calculated by charging all cash costs against it, and using prevailing custom rates for field operations. Yields were 19.4 tons per acre of silage and 80 bu. of shelled corn per acre.)

But it's the total cost of producing a pound of beef that determines whether there is a profit or loss. This figure too turned out very well on the Cohoe feedlot. In tallying every cost involved in the feedlot, the total cost of producing each pound of beef was 18.5 cents per pound.

Despite a substantial negative price margin on last year's operations (and Fred believes this will continue to be a problem so long as he wants to feed quality cattle), he still showed a nice profit.

Cohoe is a dairy and cash crop farmer. In establishing his feedlot as a separate enterprise, he hired a full-time man to look after it. Keith Weber started the cattle on full-feed corn silage plus 1½ lb. per day of beef cattle concentrate. Later he added high moisture grain corn to the ration to push the heifers a little faster, although he is sure they would have done well without it. He added vitamin A and vitamin D to the ration as well. ✓

### New Hog Cholera Test Developed

A NEW 1-day test to accurately diagnose hog cholera has been developed by USDA scientists at the National Animal Disease Laboratory, Ames, Iowa. The test is easy to perform and is relatively inexpensive. It is now ready to be tried under practical conditions.

Up to now, the most reliable proof of hog cholera is obtained by inoculating healthy young pigs with a sample of blood or tissue taken from suspect animals. This test is fairly expensive and takes several days to complete.

The new test, which takes less than a day, uses a combination of fluorescent dye and anti-hog serum. Tissue cells from an infected hog will retain the dye-serum, while non-infected cells will not. The difference can be readily noticed when examined microscopically under ultraviolet light.

Unlike Canada, the U.S. does not follow a complete slaughter pro- (Please turn to page 34)



# “How AUREOMYCIN® CRUMBLES cuts scours by over 81%”



## Clare Burt reports on Aureomycin® Crumbles



**Aureomycin Crumbles cuts feeding time and costs — and makes it easier to give animals the wonder-antibiotic benefits of Aureomycin. Field tests prove its effectiveness in fighting foot rot and shipping fever in cattle — and as a top disease-fighter in swine, sheep and turkeys. Read these additional facts:**

1. Aureomycin Crumbles is your top fighter against bacterial scours in beef and dairy calves. *One trial, showed 29 cases of scours in control calves with no Aureomycin — only 3 cases in calves on Aureomycin. An 81% reduction for about 10 cents per head per week!*
2. Two heaping tablespoons of Aureomycin Crumbles each day helps prevent foot rot in cattle — again about a 10 cent investment per head per week. Just sprinkle Crumbles on your feed. It's also a fast, easy way to supplement deficient Vitamin A levels in late winter forage.
3. Aureomycin Crumbles improves gain, rate of gain, and lessens the danger of pneumonia in rhinitis-infected swine. Field trials on 'rhinitis-pigs' showed a 50% reduction in deaths. The pigs added weight 22% faster: reached market weight nearly 2½ weeks early.
4. Ask about Cyanamid's Co-ordinated Feed-Health Program — and check these facts with your Feed manufacturer or dealer. *And remember: Aureomycin Crumbles comes from Cyanamid.*

### **ALSO USE AUREOMYCIN CRUMBLES TO PREVENT DISEASE IN TURKEYS AND SHEEP:**

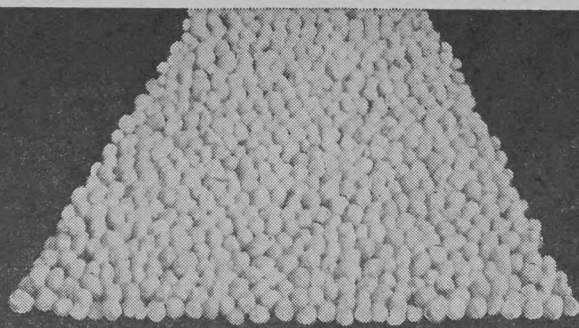
1. In sheep — to cut enterotoxemia (over-eating disease) losses in feed-lot lambs.
2. In turkeys — to help prevent infectious sinusitis — to keep up weight despite blue comb-mud fever, and in stress periods, such as moving, vaccination, high temperatures.

For further information on any Cyanamid products write: Cyanamid of Canada Limited, Montreal 2, Que.

**CYANAMID**

®Aureomycin is Cyanamid of Canada's trademark for Chlortetracycline





here's proof that Elephant Brand



3116

turns into higher profits for you

FOR EXAMPLE: ELEPHANT BRAND FERTILIZER ON DEMONSTRATION FARMS REALIZED

<p>ON SUMMERFALLOW</p> <p><b>\$8.40</b></p> <p>EXTRA NET PROFIT PER ACRE</p> <p>after paying for fertilizer</p>	<p>ON STUBBLE &amp; SOD BREAKING</p> <p><b>\$7.78</b></p> <p>EXTRA NET PROFIT PER ACRE</p> <p>after paying for fertilizer</p>	<p>ON FORAGE</p> <p><b>\$11.50</b></p> <p>EXTRA NET PROFIT PER ACRE</p> <p>after paying for fertilizer</p>
---	---	--

These extra net profits are due to fertilizer alone. They are average profits based on 5-year Cominco Demonstration Farm results from 58 fields on summerfallow, 80 fields on stubble and sod breaking, and 49 fields of forage. And they all represent *extra net profit*—the extra profit per acre after paying for the Elephant Brand fertilizer.

**On grain,** Elephant Brand fertilizers pay off in bigger yields and better grades. Help beat dry weather, too, because research shows that fertilized crops require about  $\frac{1}{3}$  less moisture. Crops fertilized with Elephant Brand mature faster—can be harvested up to 5-10 days earlier to avoid frost damage.

**On forage,** Elephant Brand means more pounds of beef or milk per acre, because fertilized pasture is more palatable and nutritious, can be grazed longer. Fertilized hayland gives a higher yield of more nourishing feed—combines greater gains with *savings on winter feed supplements.*

**See your "Partner for Profit."** Your local Elephant Brand dealer can help you to bigger yields and higher profits. He knows the crops, soil and growing conditions in your district, and he'll be glad to help you plan a profitable Elephant Brand fertilizer program.



**Elephant Brand<sup>®</sup> high analysis FERTILIZERS**

FOR NITROGEN USE: 21-0-0 • 33.5-0-0 • 45-0-0 • 82-0-0 FOR NITROGEN AND PHOSPHATE USE: 11-48-0 • 16-48-0 • 16-20-0 • 23-23-0 • 27-14-0 FOR NITROGEN, PHOSPHATE & POTASH USE: 10-30-10 • 13-13-13 • 13-16-10 • 14-14-7

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gram for controlling hog cholera outbreaks. Several areas in the States, however, are strengthening control regulations in an effort to use every means possible of eradicating the disease. Even though outbreaks of hog cholera are comparatively few and far between, Canadian veterinary authorities are reported to be interested in the new U.S. diagnostic test. V

## Backfat Probe a Good Indication

**H**OG producers promoting boars from their herd to the breeding pen should probe these potential sires for backfat thickness, advises Dr. G. W. Rahnefeld of the CDA's Brandon, Man., Experimental Farm.

The animal geneticist points out that degree of fatness is a highly inheritable trait and that there is a strong relationship between backfat thickness and the percentage of fat on the entire animal (if there is a lot of backfat there is likely to be a lot elsewhere).

For this reason selecting sires for reduced backfat thickness is bound to improve carcass quality in that important respect.

Not enough Canadian hog breeders take the trouble to check for backfat by a simple procedure that has been practiced successfully elsewhere, Rahnefeld admonishes.

Take boars and gilts of equal weight and age raised in the same herd. You want to select them for leaner carcasses. Measuring backfat thickness requires making three small, almost painless incisions in each animal. The incisions should be quarter of an inch deep and three-eighths of an inch long—long enough to insert a narrow measure. Incisions are made  $1\frac{1}{2}$  inches on one side of the mid-backline and at these three locations:

- Directly behind the shoulders,
- At the last rib, and
- In the middle of the loin.

The measuring ruler is inserted into the incisions and pressed down to the underlying muscles, which can be reached with little resistance. The average of the three measurements on each animal should be calculated and the results compared for selection.

It is important to measure at the same points on each animal. The reason for selecting from animals of the same weight and age and herd is to ensure that differences in backfat thickness are heritable differences rather than the results of different feeding practices.

Equipment for making backfat probes can be obtained from the trade. V

## Swine Health Plan Launched in N.S.

**A**N attempt is being made in Nova Scotia to improve the health of the province's pig population. According to A. R. Main, provincial



veterinarian, this is being done through the enrolling of swine herds in a swine herd health program. Eight herds are already enrolled and the aim of the program is to establish the recognition of these herds as sources of healthy swine seed stock with emphasis on herd health—plus quality, of course.

This swine herd health program is open to breeders of purebred, record-of-performance tested swine. Any breeders who would like to participate in this are invited to get in touch with Dr. Main at the Nova Scotia Agricultural College, and he will be more than pleased to explain the purpose of the program, how it works, and what regulations and procedure a swine producer must follow, should he become associated with this program. ✓

## Alfalfa Bloat Fears Unfounded

**E**FFORTS to produce alfalfa bloat in grazing animals have been unsuccessful at the Swift Current Experimental Farm in the past 4 years. Results indicate that fear of bloat is not a valid reason for omitting alfalfa from pastures in Saskatchewan.

In the 3-year period, 1960-62, sheep were used to check the frequency of bloat on alfalfa pasture. Four alfalfa varieties consisting of Rambler, Ladak, Vernal, and a synthetic developed at Saskatoon, were seeded separately in pure stand and irrigated at regular intervals.

Approximately 80 yearling ewes selected at random from the farm flock were grazed on the alfalfa each year. In most years grazing started in early June and terminated about the end of August, with a 21-day rest period between grazings. This gave a total of 4,360 sheep days of grazing in the 3 years that the test was conducted. No additional feed was given while they were on the alfalfa.

In 1963 another test which contained the alfalfa varieties, Rambler, Alfa, Grimm, and Siberian, in pure stand, was grazed by 16 2-year-old Hereford steers. The steers were a mixed group purchased for the trial and were not related to one another. Moisture conditions were good in 1963 and although the alfalfa wasn't irrigated it produced sufficient growth to support the steers for 5 weeks on a rotational basis without additional feed.

The animals used in these tests were rated visually at regular inter-

vals throughout the day for signs of bloat. No serious cases of bloat developed in either the sheep or the steers at any time. Some tendency to bloat was noted in a few sheep and two or three steers, particularly when first introduced to alfalfa in the early green bud stage of growth. None of these cases became sufficiently advanced to require treatment of any kind. There was no relationship between alfalfa variety and degree of bloat. Similarly, dew or rain on the plants did not appear to promote bloat.

The results obtained from these tests emphasize that the livestock grower should not omit alfalfa from his pasture for fear of bloat. On the other hand, these results should not be interpreted as meaning that it is good policy to graze animals on pure stands of alfalfa. In fact, re-

search workers have shown on many occasions that grass-alfalfa mixtures will give better liveweight gains than either grass or alfalfa alone. Seeding rates for grass-alfalfa pastures in Saskatchewan along with recommendations for their management are given in "The Guide to Farm Practice in Saskatchewan," or may be obtained from the local Agricultural Representative or Experimental Farm. ✓

## Protect Against Blackleg, Edema

**T**HE main difference between blackleg and malignant edema, according to Dr. H. N. Vance, Assistant Director of the Alberta Veterinary Service Branch, is that blackleg usually attacks calves between 3 to 4 months and a year old while malig-

# BACKACHE

Due to faulty elimination can be relieved overnight with the help of

## DR. CHASE'S K & L PILLS



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# STOP PIG ANEMIA

## with RUBRAFER IMPROVED

## and the new VET-JECTA



**Vet-Jecta—a real work saver.** A quick and easy one man operation. Simply insert a cartridge of Rubrafer Improved in the unique Vet-Jecta and you're all set to inject 12 pigs, without reloading. Four squeezes on the trigger automatically measures out one dose. There isn't an easier or faster method!

**Use the Vet-Jecta in complete safety.** You won't impair the quality of your pig carcasses or cause profit reducing abscesses. Just use the Vet-Jecta as directed. Rubrafer Improved is recommended for subcutaneous injection (under the skin) behind the foreleg. If you prefer, you may inject directly into the ham without staining.

**You get 'more than enough' in Rubrafer Improved.**

**IRON**—each .84 c.c. dose contains the equivalent of 100 mg. of elemental iron...more than enough iron to prevent anemia and keep a pig growing vigorously during the critical 4 to 5 weeks before creep feeding.

**VITAMIN B<sub>12</sub>**—each dose supplies 80 mcg...more than enough to meet a pig's daily needs until he's able to manufacture his own supply. Vitamin B<sub>12</sub> is essential for the formation of red blood cells, the lack of which can cause anemia even when sufficient iron is available.



**Rubrafer Improved pays off in more pig pounds.** Treated pigs have been shown to gain almost 3 times more than untreated pigs over a 4 week period. Hemoglobin blood levels of pigs treated with Rubrafer Improved were up, out of the anemia danger zone in only 1 week. Pigs injected at one week of age were protected for the entire pre-creep feeding period.

Ask your dealer about Rubrafer Improved and the new Vet-Jecta, soon!

# RUBRAFER IMPROVED

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# SQUIBB

AGRO-VETERINARY DIVISION





nant edema can affect animals of any age. Blackleg comes on in the spring and summer months while malignant edema is much more common in the winter months. Hence it is often referred to as stable or winter blackleg.

Lameness and swollen limbs are symptoms of both blackleg and malignant edema. If you run your hand over the affected area you can usually feel gas under the skin. Treatment is not usually successful in either case because the diseases hit so quickly and so hard that there is very little time to do anything.

Preventive treatment, however, in the form of bacterins, is very effective when properly carried out. The two most common mistakes are vaccinating the calves when they are too

young and vaccinating only once. If you vaccinate calves before they are old enough, their systems are too undeveloped for good immunity to take effect. Dr. Vance recommends vaccinating calves at 3 to 4 months of age and then again when they are weaned in the fall. If you do this you will get very good protection against both blackleg and malignant edema. ✓

## Vitamin A Essential

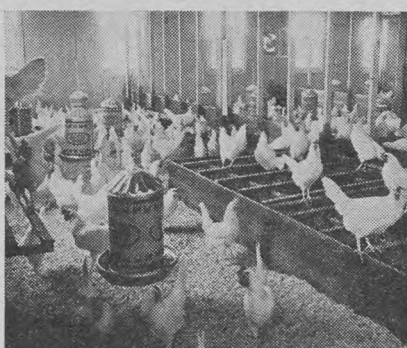
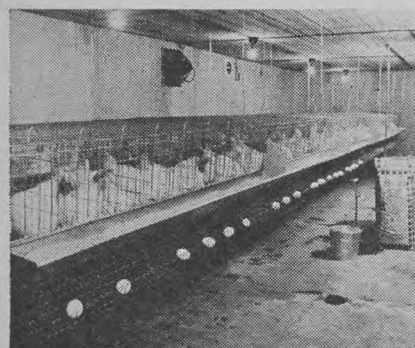
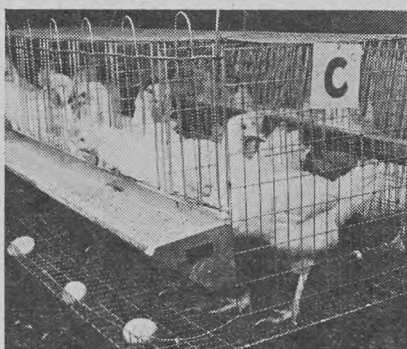
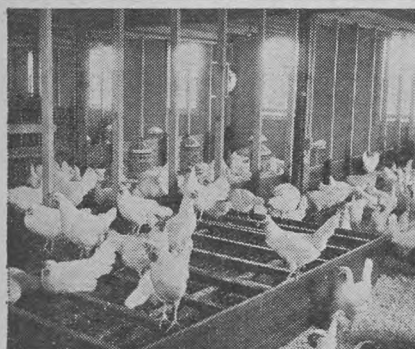
ACCORDING to W. C. Gordon, a livestock supervisor with the Alberta Department of Agriculture, vitamin A is essential to an animal's resistance to infection and disease.

It also influences the breeding ability of both males and females. Animals store vitamin A, manufactured from green plants rich in carotene, in their liver. Unfortunately, however, they cannot store enough to carry them through the 5 or 6 months of winter which we have in this country.

Dry stabilized vitamin A can be incorporated in protein pellets, cubes and blocks. It can also be made up as a pre-mix which can be added to ground or rolled grain. Thus a daily allowance can be fed which will ensure the animals get a sufficient amount of this vitamin. If it is not practical to give cattle on winter grazing vitamin A daily, they can be given it once or twice a week. On this basis they should get half a week or a full week's requirements in one feeding, depending on the circumstances.

Mr. Gordon recommends giving feedlot cattle on a low ration approximately 10,000 I.U. of vitamin A per day. If they are not getting hay, only straw, this should be increased to 20,000 I.U. Steers and open females which are just being wintered may not need any vitamin A if the color and quality of their hay or silage is good. If the quality leaves anything to be desired, they should be given at least 5,000 I.U. per day.

Pregnant cows and heifers may not require any vitamin A supplement if their hay or silage is excellent in color and quality. If their roughage is not first class, however, they should be given 20,000 to 30,000 I.U. per day. If it is not possible to get the roughage analyzed, Mr. Gordon says it is better to err on the safe side than to risk having calves born that are weak and lack disease resistance. ✓



Flocks under test at Master Feeds Research Farm.

## Slatted Flooring for Cattle

THE first completely slatted floor for confinement feeding of beef cattle was on demonstration at the Farm Progress Show in Morton, Ill., last fall. The floor slats are made of steel and measure 5" wide with 1 1/2" space between each slat.

The sides of each slat are tapered in and under to allow the manure to drop away rather than cling. The floor is self-draining and provides a clean, dry surface for firm footing by the cattle. The slats come in 8' and 16' lengths and require only a hammer for installation.

Reported advantages of the steel flooring are:

Less slipping of cattle as compared with wet concrete or wood; permit greater concentration of cattle in space as little as 30 sq. ft. per head; elimination of the need for bedding; less time required for manure removal, and no absorption of waste, moisture, or disease. ✓

## First R.O.P. Station in Saskatchewan

CATTLE breeders in the Biggar area recently opened the first performance testing station for beef cattle in Saskatchewan, according to the Saskatchewan Department of Agriculture.

Plans for the new station call for having 35 purebred bull calves from 23 breeders in the district, to be held in a central feedlot near Duperow, started on a uniform gaining ration. The bull calves were weighed in to the feedlot in early November and will be weighed out again next spring. The purpose of the trial is to point out the individual bulls capable of making the best gains in that period under uniform conditions.

The aim is to have this serve as a guide to the commercial beef producer who wishes to select a bull that will leave him the biggest and fastest-growing calves.

Similar testing stations are already in use in beef-producing areas of the United States and Ontario. The official R.O.P. beef cattle program is sponsored jointly by the federal and provincial governments. ✓

# THEY TELL "THE WHOLE TRUTH AND NOTHING BUT THE TRUTH" ... ABOUT FEED

The hens pictured above are in experimental pens and cages at Master Feeds Research Farm. We have more but these are enough to demonstrate our point.

Some of these pens are being fed regular Master laying feeds, the same as we are manufacturing for customers. Other pens are being fed experimental rations ... some with higher protein, some with higher energy, some with extra vitamins, some that contain different ingredients than we use in our regular formulations. If any of these experimental rations proves more profitable, in actual dollars

and cents, after repeated tests, it will become the new "Master" formula. If not, it will be discarded, and replaced by another experimental ration. The process is continuous.

So when you choose ANY Master laying feed ... complete feed or supplement ... for birds on the floor, birds in cages ... you may have complete assurance that it has been PROVED MOST PROFITABLE in practical feeding trials. Consult your Master dealer. Master Feeds, division of Maple Leaf Mills Limited, Saint John, N.B., Montreal, Toronto, Winnipeg, Calgary, New Westminster.



# MASTER FEEDS • IT'S RESULTS THAT COUNT!

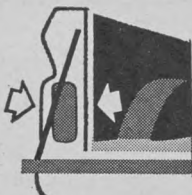


# Some important information for every man who will need a new truck within the next 12 months

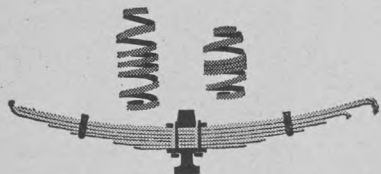


*New Chevrolets are a lot more truck than your money bought the last time. Here are some of the things that have been done to give you more value for practically the same investment.*

**Double-wall construction.** This feature of Chevrolet cabs and the Fleetside pickup body has many advantages — here are two. Insulation and sound-deadening material is sandwiched between the two layers of steel in the cab roof to give you more comfort; in the body, the inner wall acts as a buffer against load damage, preserving the outer appearance of the truck. Other insulation includes full undercoating of the cab floor, and a thick woven cotton fibre pad for the underside of the cowl chamber.



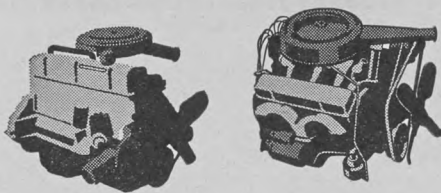
**Suspension to fit the truck.** Instead of making one type of suspension system do for the whole truck line, we now have different types and combinations of springing designed for your particular needs.



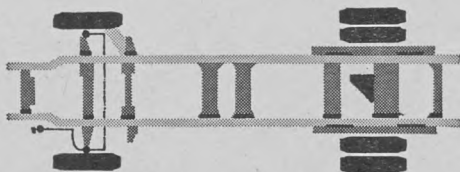
Conventional half- and three-quarter ton models have independent front suspension with variable pitch coils in the rear.

Mediums and heavies have I-beam front suspension with variable-rate leaf springs.

This variable-rate leaf-type suspension automatically stiffens as the load increases — and vice versa.



**The right engine.** Chevrolet has been building truck engines since 1918 but never has it been in a better position to give you the type and size you need. Today there are many different capacities of gasoline and diesel Chevrolet truck engines — fours, sixes, V8s.



**Stronger frames.** Every conventional 1964 Chevrolet truck has a ladder-type frame. Formerly used on heavier trucks only, this type is more resilient, better able to give with the load and terrain, to stand up under stress.



**Quality trucks always cost less!**

**Greater model selection.** This time you're going to find it a simple matter to pick the exact type of Chevrolet truck for the kind of work you do. In delivery trucks, for instance, in addition to regular panels and pickups, there is a full range of 4-wheel drive units to take care of those cross-country chores.



Have you seen the '64 El Camino deluxe pickup yet? We think it's the best looking commercial vehicle ever built. This is a dual-purpose vehicle that works like a truck all day — and looks like a sassy passenger car come evening.

In the medium- and heavy-duty area there are tilt cabs, low-cab-forward and conventional cab units to suit almost any requirement — including school bus bodies of up to 66 passenger capacity.

**Quality and value.** Chevrolets today are a lot more truck than your money bought the last time. Call your Chevrolet dealer today for information and a demonstration.

A GENERAL MOTORS VALUE

# 1964 CHEVROLET TRUCKS

*Telephone your Chevrolet dealer about any type of truck*



# Pasture or Corn Silage for Steers?

## Gracey's Steers

	Corn Silage	Pasture
No. of steers	10	9
Initial weight (lb.)	846	859
Days on feed	91	91
Average daily gains (lb.)	2.31	2.21
Final weight (shrunk) (lb.)	1,050	1,043
Feed—pasture		7 acres for 9 steers for 91 days
—corn silage (lb. per day)	64.1	
—soybean oil meal (lb. per day)	1.0	
Initial cost per cwt.	\$25.00	\$25.00
Feed cost per cwt. Gain	\$11.90	\$ 5.00
Market price per cwt.	\$24.19	\$25.02
Carcass grades—Choice	2	1
—Good	6	6
—Standard	2	2
Dressing per cent	53.3	55.1
Pounds beef per acre	1,050	300
Returns per acre (net)	\$88.00	\$51.00
Returns per steer (net)	\$17.70	\$40.00

THE answer to this question may well depend on whether you're interested in achieving the greatest possible profit per acre or whether you're more interested in the profit per steer. An experiment carried out by Charlie Gracey of Kemptville Agricultural School has pointed this out. A group of Western steers fed on pasture last summer

gave higher net returns per steer than did a group which was fed corn silage. However, the corn silage group showed a higher profit per acre. Both groups gained at about the same rate and there was no difference in average carcass grade.

These trial results indicate that there is a definite place for pasture in steer programs. A low investment

in equipment is required when steers are fed on pasture and while yields per acre are low, profits per steer are quite favorable. On large tracts of relatively cheap land considerable profit can be made pasturing steers. On the other hand, farms of limited size cannot support enough steers on grass to total a worthwhile profit. ✓

## Profit from Grass-fed Steers

BEEF can be produced economically by marketing steers off grass after one winter feeding period.

Getting choice 950-lb. steers to market at 18 months of age required only the single winter feeding period and 350 lb. of meal per head in tests at the Central Experimental Farm, Ottawa, reports W. A. Jordan of the Animal Research Institute, Canada Department of Agriculture.

Good breeding, roughage and pasture were the key factors in this method of production, he said. The method produced uniform steers of moderate fleshing, and all graded Choice.

Twelve Shorthorns used in the test averaged 75 lb. when born in the early spring of 1962. They weighed 500 lb. at weaning in late October—a gain of about 2 lb. daily. From then on throughout the winter they were fed an average of 5 lb. of mixed legume and grassy hay,

24 lb. of grass silage and 1.8 lb. of meal. The meal comprised 45 per cent oats, 30 per cent barley and 25 per cent bran.

Winter gain amounted to 1 pound daily and the average weight by spring was 711 lb.

In mid-May the steers were put on a good grass-legume pasture. Pasture was divided into plots, grazed in rotation and clipped to prevent over-maturity.

Average daily gain on pasture was 1.6 lb., and the steers were marketed in early fall weighing 950 lb.

"The steers' efficient utilization of pasture was probably due to limited winter grain feeding which avoided a setback when they were turned on grass," Mr. Jordan says. ✓



## Same man...two hats...

A grease-stained, sweat-soaked cap—a natty fedora—both are worn by today's farmer-businessman as he competes in the arenas of modern agriculture.

It takes more than muscles and sweat to farm these days. It also takes a thorough knowledge of production costs, feed efficiencies and sound management practices. It takes a business-like approach to make farming profitable.

This is where your SHUR-GAIN Feed Service mill makes the difference. Twenty-five years ago, the Feed Service idea was started by SHUR-GAIN, not just to provide balanced feeds at lower costs, but to make available efficient feeding programs for every type of livestock and poultry—programs developed from practical knowledge and the latest informa-

tion developed and tested in Canada by SHUR-GAIN's team of nutritionists.

### SHUR-GAIN Program helped boost B.C.A. over 22% in 3 years

By good management and a SHUR-GAIN Dairy Feeding Program, Mr. Anthony Bakker of R.R. #2, Elora, Ontario, increased the B.C.A. on his Holstein herd from 113-116 in 1960 to B.C.A. of 138-139 last year. It takes good management and a SHUR-GAIN Feeding Program to get the most from your livestock. Let your local SHUR-GAIN Feed Service Mill help you become a successful farmer-businessman.





# A Yardstick for SPF Swine

ONTARIO'S SPF swine breeders are beginning to recoup the heavy investments they made to establish their herds in recent years. Only a few herds have achieved certification and this limits the supply of breeder stock. As a result, breeders report that they have orders booked 4 to 6 months ahead of farrowing for swine to go into secondary herds.

The standards for certification are rigorous and breeders will also have to maintain high standards in selecting breeding stock, if the certification program is to prove worthwhile.

R.O.P. test results are now providing a means of comparing SPF hogs with non-SPF hogs. These should help farmers decide whether or not they should establish secondary SPF herds. Of 94 litters tested and reported, 14 were SPF litters. Here are the results:

	14 SPF Litters	80 Non-SPF Litters
No. of scores over 90.....	7 (50%)	16 (20%)
Test completed in under 170 days .....	8 (57%)	25 (31%)
Scoring over 90 in under 170 days .....	5 (36%)	2 (2.5%)
Average score .....	88	79
Average days on test .....	163	181

A serious weakness in the SPF program is the absence of feed conversion figures, which are only available for litters evaluated at official test stations. Since test facilities are known to be infected with both virus pneumonia and atrophic rhin-

itis they cannot be used by SPF breeders.

Malcolm Davidson, of Brucefield, who is secretary of the Ontario SPF Association, made the comment that "There should be an SPF test station; perhaps this will require a breeder effort."

The number of days to market weight, the grade and feed conversion are the chief criteria by which farmers will judge the economics of SPF swine. Comparison of the old and the new herds is difficult without access to full facilities of test stations, consequently a report in the British Veterinary Journal is timely.

The report concerns a virus pneumonia-free herd which was kept entirely separate from the buildings used for finishing hogs. Fairly accurate records were kept over a 3-year period for the 120-sow herd. In the first year both sets of buildings were free of virus pneumonia. In the second year the finishing barns became infected but were again free of the disease in the third year. The breeding stock remained free of the disease throughout the entire period. Infected hogs were less profitable because they had a poorer feed conversion and a slower rate of growth. In the years when the hogs were known to be free of disease they made an extra profit of

some \$4.75 per hog. No other disease was identified throughout this period and there were no changes in management or housing environment. Even though the infected hogs were less profitable, they appeared to the farm staff to be healthy. The importance of the disease was only apparent to the veterinarians.—P.L.V

## Edema Disease in Hogs

EDEMA disease, also referred to as gut edema, is one of the most serious and costly swine diseases in Alberta, according to Dr. G. S. Wilton, pathologist with the Alberta Veterinary Services Branch. He reports the disease was diagnosed by the Veterinary Laboratory on 70 premises last year and diagnosed on 52 farms so far this year. Veterinarians throughout the province have also reported heavy losses from the disease.

The exact cause of edema is not yet fully understood but many authorities believe an enterotoxemia from certain strains of disease-producing bacteria in the intestines is involved. Research workers have also been studying the possibility of a virus being responsible.

According to Dr. Wilton changes in surroundings, changes in feed, vaccinations, weaning, etc., all seem to be factors. Pigs between 6 and 16 weeks of age are the most susceptible to edema but both younger and older

animals can also contract the disease. The number of pigs affected can range from 4 to 40 per cent. The mortality rate also varies and can reach as high as 90 per cent.

Refusal to eat is usually one of the first symptoms of swine edema disease but cases have been reported where one, two or three fine healthy animals were found dead 8 to 12 hours after they had been seen feeding. Wilton says it is usually the strong healthy pigs that are the first to succumb to edema.

It is not uncommon for pigs with this disease to stagger, sway or stumble. The swaying progresses in a few hours to paralysis of either the fore or hind legs. Sometimes a sick animal will drag his hind legs. Tremor or running movements may also be noticed. The paralysis is usually followed by a state of unconsciousness and death within 36 hours.

Edema or puffiness of the eyelids is a noteworthy symptom but is not always present. This condition may be found in any part of the animal's body, particularly in the wall of the stomach and in the membrane which supports the intestines.

Dr. Wilton says herds showing edema symptoms should be taken off feed for 24 hours and given water medicated with epsom salts. A veterinarian should be consulted immediately to make sure the condition is edema. He can also recommend treatment and control measures. Treatment is usually, but not always, effective. V







*Ford* 4000 ALL-PURPOSE TRACTOR 3-4 plow power for anything from plowing to harvesting. New comfort seat and other fine features are standard. 2 fuel options, 4 transmissions, 3 PTO options, built-in hydraulics, 3-point hitch, draft and position control, too.



### *Ford* 5000 SUPER MAJOR

Full 4-plow power at an amazing low cost per horsepower. Differential lock for welcomed traction when it's most needed. Disc brakes, 6-speed transmission, regular or live PTO, 3-point hitch with simple switch from category I to II. Built-in hydraulics with touch control, position control, draft control and flow control . . . plus remote cylinder control. "Super" comfort, too.

### *Ford* 2000 SUPER DEXTA

Full 3-plow power . . . 20% more power than previous model. You'll probably have a hard time finding a job big enough to put a gallon of fuel per hour through the diesel engine of this fuel miser. Diff lock, too! Regular or live PTO, 6-speed transmission and built-in hydraulics. Flow control, also, to let you vary draft and position response in degrees to match changing conditions.



### *Ford* 2000 TRACTORS

2-3 plow power in both row crop and all-purpose models. Dual or single wheel tricycle or wide front ends on the row crops. Just check the transmissions: 10-speed Select-O-Speed—the field-proven power shift; 5-speed and 4-speed, regular type; 12 speeds available by adding over-under to 4-speed transmission, there's even a reversing transmission available with the 4-speed. Check the PTO's, too: Independent with Select-O-Speed transmission, live with 5-speed, or transmission driven with 4-speed. New easy-to-mount, easy-to-ride Ford tractors put you ahead every way you look at 'em.



# FORD'S BLUE LINE

## ...now better than ever!

**Deep inside** are improvements . . . others are in plain view on the outside—put there by Ford engineers to make farming easier and more profitable for you. See the new Fords soon! You'll find every series, every model has refinements in the fine Ford tradition of piling improvements on top of improvements, year after year.

**Blue stands for QUALITY!** And Ford's got it! Better economy to help you cut operating costs. More dependability to go all day, all week, all year . . . and Fords have the guts to go when the going is tough, too! More durability . . . long-life kind of durability in keeping with the quotation, "You see more Fords around because Fords last and last and last!" More operator ease and comfort to make days seem shorter and acres smaller. Long tractor-driving days can be bone-tiring, but not with a Ford tractor . . . you'll finish the day with more energy left than ever before.

**Select-O-Speed**, Canada's first full power shift . . . with new refinements and improvements. You can multiply your power or multiply your speed *on the go* by selecting any of 10 forward or 2 reverse speeds. A simple wrist movement does it. You can even skip-shift to any speed range, passing right through or by any speed ranges you wish. It's a straight-line shift pattern. There's absolutely no stopping, no clutching . . . nothing but power shifting with Ford Select-O-Speed. And, Ford's independent PTO is power shift, too.

You stand to save more time, fuel and money, by using Ford's Select-O-Speed than with any other tractor transmission.

**Power-sized for your farm . . .** 2-3 plow, 3-plow, 3-4 plow, 4-plow and 5-plow, even a 2000 series 1-row multi-purpose offset tractor. All have integral hydraulics, 3-point hitches and other fine Ford features to match Ford's big line of farm equipment. You'll find plenty of power options and other choices, too. Just ask your Ford tractor dealer.

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# FORD

## FOR QUALITY LEADERSHIP



*Ford* 4000 ROW CROP TRACTOR

**3-4 plow power.** Versatile power for row crop farmers all across the country. You get the same fine features as on Ford's 4000 All-Purpose, and then some. There's a choice of front ends: wide axle or tricycle with single or dual wheels. Power adjustable wheels available, power steering standard, right in keeping with Ford's famous "Farm-Ease" design that offers more comfort and convenience. Select from 4 transmissions and 2 fuel options. A choice of PTO's, too!

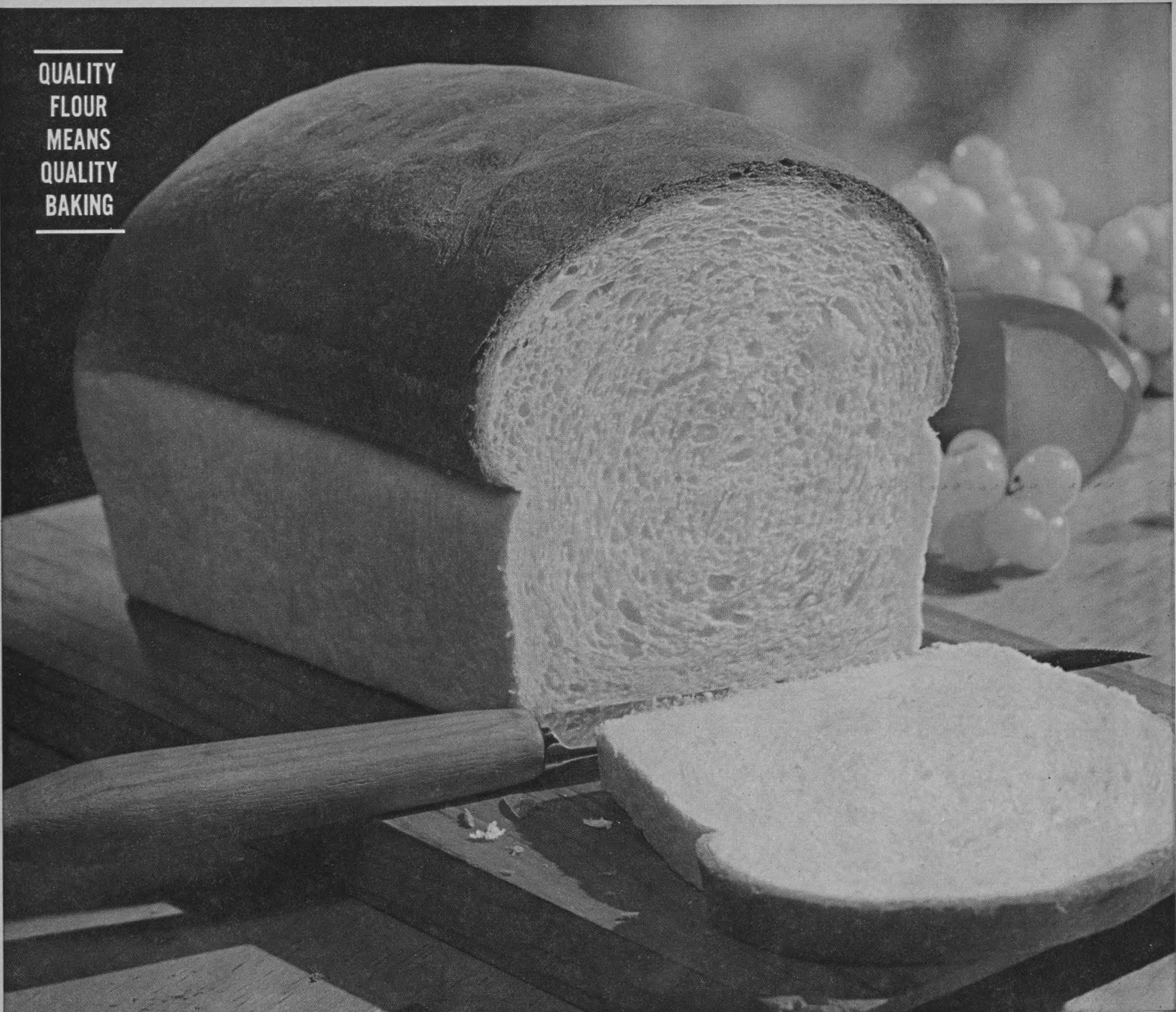


*Ford* 6000 TRACTORS

**5-plow power with features galore!** Exclusive and standard Ford features include Powr-Stor hydraulics that won't sap engine power when you need it most . . . Select-O-Speed, the proven power shift that lets you shift on-the-go to any speed you wish . . . power disc brakes, cushioned in oil . . . 2-position steering wheel so you can sit down or stand up and drive . . . 2-speed dual range power shiftable PTO, completely independent. You get even more on this "years-ahead" Ford tractor—regular position and variable draft control, power adjustable wheels, floating ride contour seat and roomy platform to make your long tractor rides more pleasant. There's much more to tell about these fine new Fords. So, see your Ford dealer, soon!



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FLOUR  
MEANS  
QUALITY  
BAKING



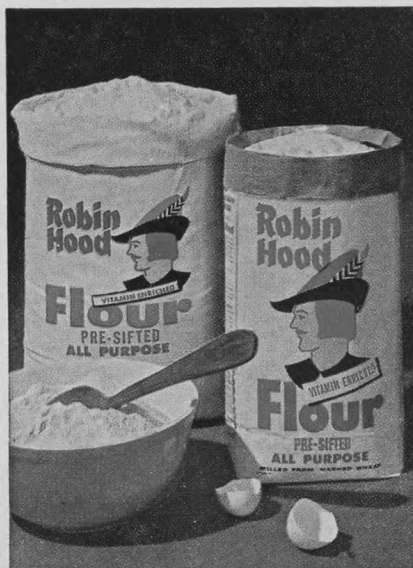
Heavenly one time? Heavy the next?

## Change to the flour that never changes

### Robin Hood's "Tested Favourite" White Bread Recipe

(makes 3 loaves)	2 Tbsp. salt
2 pkg. active dry yeast	¼ cup soft shortening
½ cup warm water	¼ cup sugar
2 cups warm milk	10 cups Robin Hood
2 cups warm water	All-Purpose Flour

Soak yeast in ½ cup water 5 min. Dissolve sugar and salt in milk and water in large bowl. Beat in shortening, yeast mix, 4 cups flour till smooth (use rotary beater). Mix in rest of flour with spoon or by hand till dough leaves sides of bowl. Knead on floured board till smooth and elastic. Let rise in greased, covered bowl till doubled. Punch down; cut into 3; round each piece, shape into loaves. Place in greased 9" x 5" x 3" pans. Cover; let rise double. Bake 40 min. at 400°F. Cool on racks.



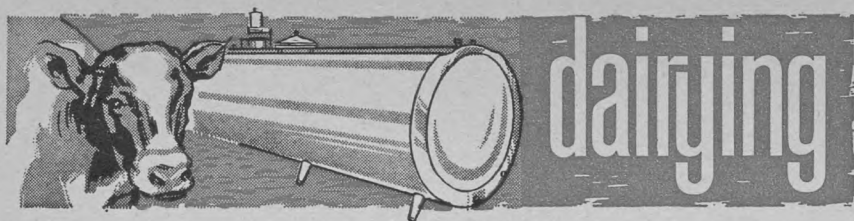
Robin Hood All-Purpose flour never varies in quality or performance. Wherever you buy it, whenever you buy it, Robin Hood flour is always the same.

Why? Because Robin Hood ensures that every bag of flour is absolutely uniform and meets the highest standards of quality. And unless the flour you use is always uniform, always the highest quality, you can't hope for rewarding results every time.

So, for dependable results change to Robin Hood—the only flour that never changes.

Seven breads from seven lands—free recipes now at your grocer's.





## Dairymen Should Raise Own Replacements

**M**OST dairymen should raise rather than purchase their herd replacements, says Dr. R. D. Clark of the CDA Research Station, Lethbridge, Alta. There is less danger of disease and a definite breeding program can be followed.

Calf raising is expensive and because of the large turnover in the milking herd (15 to 25 per cent per year) a large number of the female calves must be raised. Between birth and calving, losses of female calves amount to about 20 per cent. Calves chosen for replacements should be healthy, thrifty, and should meet the standards in appearance and breeding required by the dairyman.

Experiments conducted at the Lethbridge Research Station have

indicated that healthy dairy calves can be raised by following these simple rules:

- Have clean, well-ventilated, draft-free accommodation for young calves.
- Allow the calf to suckle the dam or provide colostrum for the first 3 days.
- Feed 6 to 8 pounds of whole milk per day depending upon size and breed.
- Feed a calf-starter (cereal grains 45 lb., bran 15 lb., oilmeal 32 lb., molasses 5 lb., minerals 3 lb.) to a maximum of 4 lb. per day and good quality hay from 1 week of age until 12 to 16 weeks of age.
- Wean from milk when calves are eating 1 to 1½ lb. of starter per

## New Forage Program Transforms a Troubled Dairy Herd

**R**ON McRAE told the Eastern Ontario Soil and Crop Improvement Association Conference at Kemptville how a good forage program transformed a troubled dairy herd. McRae, who farms with his father, Lloyd, at Bainsville, documented a successful rescue operation. "Four years ago we were feeding the cows good corn silage, and as much grass and clover as they would eat, which wasn't very much because it was soggy, sour and bitter. They were also getting average to poor quality hay of which they would not eat nearly enough. To make up for the lack in roughage, there had to be a lot of supplementary concentrate fed, which is a costly way of producing milk. With this feeding program, the cows averaged about 10,000 pounds of milk, and when all expenses were subtracted from receipts, there

wasn't enough labor income showing for our efforts. At this crucial stage, we either had to produce milk more efficiently or get out of the dairy business altogether.

"As it isn't practical to convert a large dairy enterprise to any other, the only solution was to increase milk production, per cow. In our case, the only solution to this was to put up hay of much higher quality than we were doing.

"Well, we did it. It took a big investment and resulted in more work, but it has paid off. The investment was in a furnace dryer, a self-propelled windrower conditioner unit, and a new baler."

More than the purchase of new equipment is needed to harvest and store quality hay:

- Early cuttings—as soon after June 1 as possible.
- Fast drying is made possible by the swather conditioner followed by a tractor-mounted swath turner.
- Small, uniform bales of some 40 per cent moisture, weighing 40-50 lb. are essential for fast drying.
- Batches of 600 bales can be dried in 12-24 hours at a fuel cost of \$1.20 per ton of hay.

The result has been digestible, palatable hay, high in protein; leaching and leaf loss have been kept at a minimum. Hay is fed at the rate of some 15-20 pounds per head daily and this roughage intake is augmented with corn silage. McRae can point to increased yields approaching an extra 4,000 lb. of milk per cow, reduced outlay for concentrate, and the development of better cattle for sale as breeding stock.—P.L. V



day. Usually 4 weeks for Holsteins, 6 to 8 weeks for Jerseys.

- From 4 to 8 months, feed 4 lb. of a grower ration (cereal grains 67 lb., bran 10 lb., oilmeal 20 lb., minerals 3 lb.) and good quality hay or pasture. If the pasture is of good quality less concentrate can be fed.
- From 8 months until calving, good quality pasture or roughage is usually sufficient for normal growth.

- Provide water and minerals at all times.
  - Dehorn and calfhood vaccinate at appropriate times.
  - Breed heifers at from 15 to 17 months of age when they should weigh, approximately — Jersey 550 lb., Guernsey 600 lb., Ayrshire 675 lb., Holstein 800 lb.
- Herd replacements are the milk cows of the future and should not be neglected. V

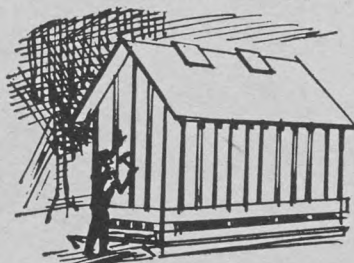
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## MADE EASILY WITH FIR PLYWOOD

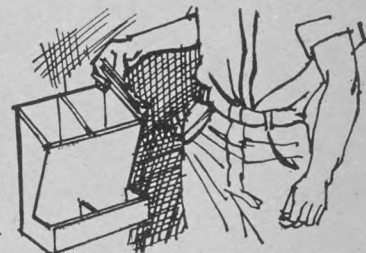
A portable feed cart is just one of many labor saving farm units you can make easily with Fir Plywood. In fact, it takes only 5 pieces of plywood for this cart (4 sides and bottom). Pieces cut easily, without waste, from big plywood panels — and ordinary tools do the job. No nail splitting either, and nails stay put because cross grain veneer layers of Fir Plywood hold them tight. All this means you build faster with plywood than with most

materials — and of course that means cost savings, whether you build the unit yourself or have someone build it for you. And whatever you build will be easy to maintain, because Fir Plywood is sanded smooth, stays that way through years of rough use.



Granaries go up quickly with big, rigid plywood panels that need less framing and fewer nails. Grit self-feeder for poultry (right) is made from plywood pieces you can cut and assemble easily with regular tools.

Informative literature about Fir Plywood and Western Softwood Plywood (marked PMBC Exterior Waterproof Glue W.S.P.) is available from your building supply dealer.



## Waterproof Glue

## FIR PLYWOOD

Fir Plywood marked **PMBC EXTERIOR** has Waterproof Glue Plywood Manufacturers Association of B.C., Vancouver, B.C.



# POULTRY

## Prevent CRD with Tylosin

**I**NJECTING day-old broiler chicks with "Tylosin" illustrates the old adage that prevention is better than cure.

Dr. John Crawley, who is in charge of the Agricultural Division of Connaught Medical Research Laboratories, makes a good case for

the use of Tylosin as a CRD preventive. Dr. Crawley cites: higher profits, better feed conversion, faster gains to market weight, fewer losses and fewer condemned birds. "Tylosin" is an antibiotic of particular value in combating pleuropneumonia-like organisms (PPLO) which precede development of Chronic Respiratory Disease (CRD). Dr. Crawley echoes two familiar warnings: indiscriminate use of anti-



[Guide photo]

biotics can lead to their ineffectiveness, and antibiotics do not reduce the need for emphasis on other aspects of sound husbandry.—P.L. V

## the challenge of tomorrow

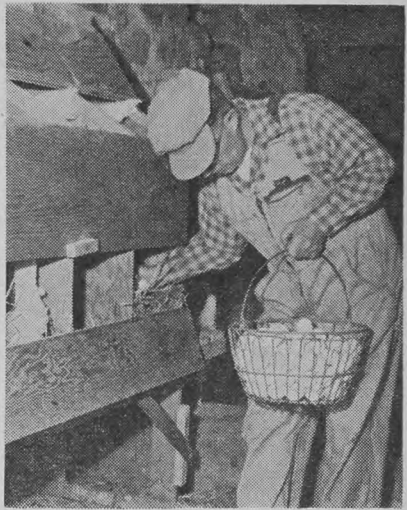
These are the men and weapons of today . . . trained and built for tomorrow. Their purpose: peace, their job: defence ■ These are the forces that defend our country — that guard our security. They're a tough team, trained hard, trained well, and trained to uphold our traditional pride in the Canadian Armed Forces ■ Today's Army keeps pace with changing times. New weapons and machinery replace the old; new ideas fill new careers. There's a challenging **you** in the Canadian Army ■ If you are single, 23, and physically fit, mail the coupon below for future in the modern Canadian Army.

new men with career awaiting between 17 and details on your



## Every Egg A Clean Egg!

**T**HE first egg nests we had cost nothing—and they were the most expensive!" says Philip Rudolph of Crediton, Ont. He now has some good nests and was sufficiently pleased with their performance in an old barn that they were the first consideration when his new 120' x

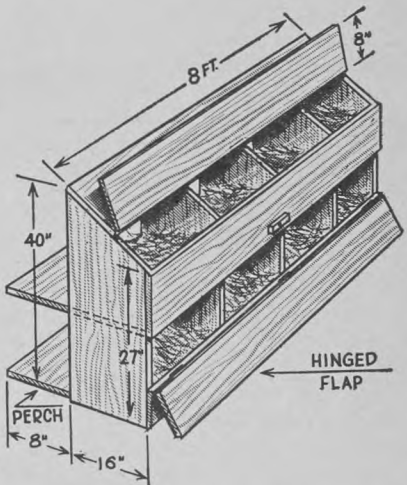


[Guide photo]

No dirty eggs from these handy nests.

36' structure was planned. They are made of plywood and have two decks of nests. The hens enter from the rear, which is dark, and the eggs are removed through the hinged flaps at the front. A sheet of polyethylene plastic is placed over the top of the nest. The birds cannot get a grip on the slippery surface and so cannot roost there or foul the lids of the nest boxes.

Seven sheets of 5/16" plywood, if carefully cut, will make two sets



of nests. Each set has 16 nests, regarded as enough for 100 laying hens. The individual nests are 12 inches wide and 16 inches deep.

Practically every egg is clean when it is laid. These nests keep them that way, says Rudolph.—P.L. V



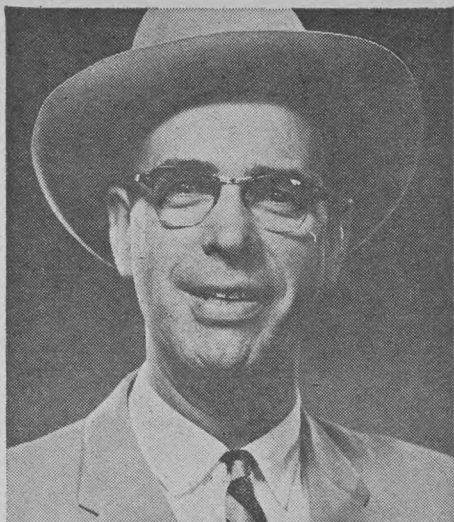
"Well, another myth shattered. Just 10 minutes ago I found a four-leaf clover!"

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Please send me, without obligation, details on career opportunities in the Canadian Army.

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Last school grade successfully completed.....





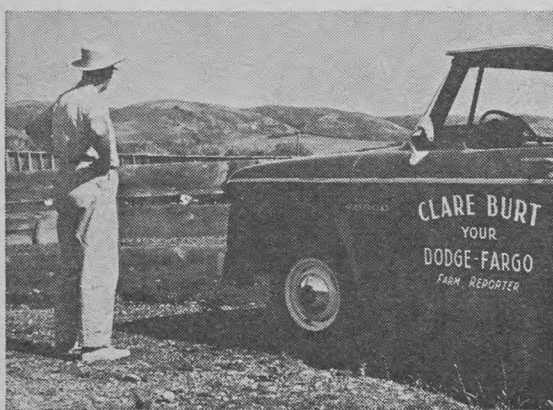
# Clare Burt

*well-known farmer, agricultural consultant and broadcaster*

## TELLS YOU WHY HE

# RECOMMENDS DODGE AND FARGO TRUCKS

My broadcasting work takes me from one end of Canada to the other. In my travels I have visited hundreds of farms and met thousands of farmers. Without exception, they all agree that a dependable, trouble-free truck is an absolute "must" if a farm is to be run profitably and properly. From these farmers I've learned a great deal about what features a truck must have to earn its keep on a farm. And that's why I can always recommend a Dodge or Fargo truck.



Wherever I go I hear farmers praising the dependability of Chrysler-built trucks. They swear by them. Many farmers I've met have been using them for more than 30 years! It's not easy for a truck to earn such a fine reputation as that!

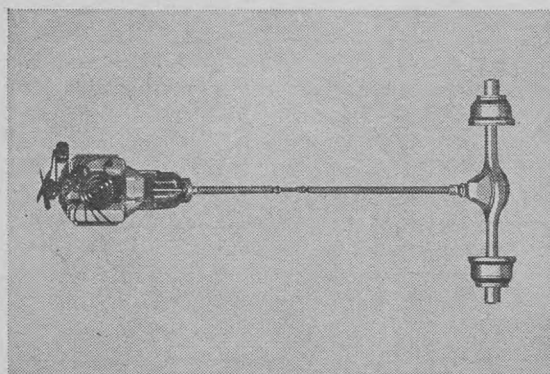
So let me describe some of the features that make Dodge and Fargo trucks so suitable for farm work.

**ECONOMY:** All farmers know that economy means more than getting good gas mileage. Of course that's part of it,

but the real secret is keeping a truck on the job all the time with an absolute minimum of downtime for servicing and repairs. That's where Chrysler-built trucks really come into their own. They have one of the best sixes available anywhere... the famous Power Slant Six. It gives out 145 horsepower and plenty of torque. A more economical, trouble-free engine you'll never find.

All Chrysler-built trucks are equipped with an alternator instead of a generator. As you know, a generator won't charge a battery until a truck's going along at a fair clip, but an alternator keeps charging a battery even while the engine is idling! This all adds up to real economy. Which brings me to the next big feature.

**DEPENDABILITY:** Every Dodge or Fargo truck carries a five-year fifty-thousand-mile power-train warranty that covers parts and labour. It covers all the major components in the engine, transmission, drive shaft, differential and rear axle. Big thing about this long warranty is that Chrysler



can make it in the first place. They must be absolutely sure of the quality and dependability in their trucks or they could never afford to make such an all-embracing warranty. To me, it means that they're trouble-free trucks... the kind of trucks that are perfect for farm operation.

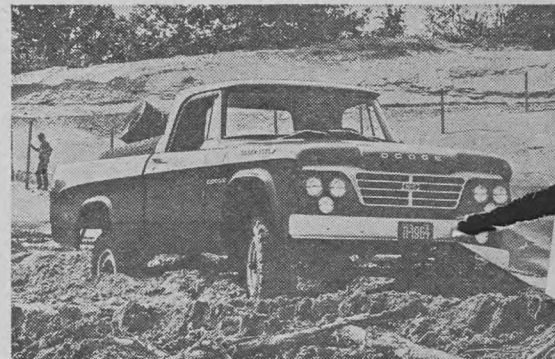
**VERSATILITY:** Most farmers I know use their trucks for all sorts of things. They use it as transportation around the farm, running errands, and even for the family outing. And that's just fine in a Chrysler-built truck. They're so comfortable to sit in, and their suspension is so good, it's like

riding in a family sedan. And I don't have to remind you how attractive they look. Incidentally, one of their newest models is the Crew Cab. It's a pickup that gives you a full 6½' box and the room and comfort to seat six big burly men. Something like that sure beats sitting in the box if there are more than three men to get around.



**TOUGHNESS:** The other day I toured the Chrysler truck plant in Windsor. And one of the things that really impressed me was the tremendous attention they pay to every little detail. There's an inspector for every seven production line workers in their plant and believe me, nothing escapes them. And I'm told that they use more spot welds than in any other make of truck. So it's no wonder these Dodge and Fargo trucks last so long. They're really built to take it.

Why don't you go in and talk to your local Dodge or Fargo dealer and get full details on these trucks. Take it from me, they're the best.



**DODGE FARM PROVED TRUCKS FARGO**  **CHRYSLER CANADA LTD.**



# MARKETING

## Do Production Controls Work?

*This farm authority describes the failure of production control programs in the past*

"**T**HINKING your way to profit" was the theme of the Eastern Ontario Soil and Crop Improvement Conference held at Kemptville last month. Dr. Ford Stinson, currently Head of the Kemptville Agricultural School's Field Husbandry Division, gave delegates plenty to think about in regard to marketing. "The profit of a farmer is the product of the number of units sold times what he makes on each unit." Because he has little to say in the price, he aims to produce as much as he can. When one cost item rises, he tries to replace it with an-

other. For instance, when wages rise, he turns to mechanical power. Rising land prices, taxes and fencing costs result in him spending more on fertilizer and drainage. It would seem that as farmers adopt more efficient production methods, they are bound to force prices down unless market demand can be increased accordingly.

"If by producing for less, we increase production enough and force prices down, what are the prospects for avoiding price collapse? There is now quite a bit of experience with price setting that may be drawn

upon. For instance, about 30 years ago, the United States launched a program of production curtailment to stabilize prices. The program became entrenched, and along with price supports has been a dominant feature of American agriculture ever since. Control was sought by limiting one production factor, namely, land. To an amazing degree farmers successfully circumvented the controls by substituting fertilizer, irrigation, chemicals and other factors of production for land, as the United States government guaranteed incentive prices. The United States' experience with production control and support prices has been that domestic consumption has been retarded, imports have risen, more and more land, buildings and machinery have sat idle and surpluses continue to rise in spite of vast sums spent to distribute them. On recognition of their failure, last year the wheat farmers themselves voted out the first of these control programs.

"In the United Kingdom, the world's largest importer of farm

products, subsidies and controls are used to bring farmer income in line with those of other segments of the economy, thus encouraging output of food and thereby reducing the need to import.

"Canada, with its large agricultural potential and small population, is unlikely to find much that can be adopted directly from either the United States or the United Kingdom program. As the Canadian economy rose in postwar years it became popular to state that we could not export in the face of competition from other countries with lower wage and living standards. Accordingly, wealthy and benevolent governments were called upon to assist in handling surplus over-priced produce. But conditions are changing, other demands with wider vote appeal are competing for government money. We are in urgent need of exports to balance payments. Economies and wage standards in other lands are gaining ground on us. All these point to the need to reappraise our outlook on exports. People who get the benefit of price and production control programs are not the ones the programs were originally intended to help. Tobacco is a case in point; growers are moving out of Ontario to avoid acreage restrictions."

-P.L.

# NEW HOME PLANS



**THE 1964 BEAVER  
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BEAVER LUMBER offers the biggest home-planning bargain of the year. The Beaver Book of Homes—just published—is now available for only \$1.00. The Beaver Book of Homes is fully illustrated in gorgeous, glowing colour and is completely detailed from Architects' floor plans to Interior Designers' decorating suggestions. Thirty modern homes in a complete range of sizes, styles and prices are featured including plans from two bedrooms to five bedrooms in a variety of pleasing Contemporary and Colonial designs. This is the book you'll want—the book **YOU'LL NEED**—if you're considering a new home. It's published by Beaver Lumber... the home building specialists. Simply clip and send the coupon below with a one dollar money order to your nearest Beaver Lumber Division Office.

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## Farmers Taxed Fairly

With the exception of property taxes, tax laws have treated farmers fairly without giving them special favors. This was the opinion placed before the Royal Commission on Taxation by the Canadian Federation of Agriculture. The Federation added that it considers personal income tax a preferred source of tax revenue since it is based on ability to pay and can't be hidden or passed on.

The Federation said farmers, as heavy owners of land, are discriminated against when property taxes are raised for purposes other than services directly related to the property. It said many farmers feel there is a strong case for more financing of education from Federal income taxes, provided this is done so as not to interfere with provincial autonomy.

Other points made included:

1. Sales taxes should be applied only at the level of final domestic consumption.
2. Sales taxes should not be levied on goods to be exported, or on goods or services going into the cost of exportable goods.
3. The burden of taxes should fall as little as possible on food, since the burden of such taxes tends to fall more strongly on the farmer.
4. Tariffs should not be used primarily as a source of revenue, but rather in relation to trade and economic policy.
5. There should be no capital gains tax on farm property.
6. Estate taxes should recognize the wife as making a contribution to the farm estate.

The Federation concluded that Canada does not have an excessively high level of taxation and said it sees no evidence that a reduction in taxation should be a major objective of government policy.—J.M.

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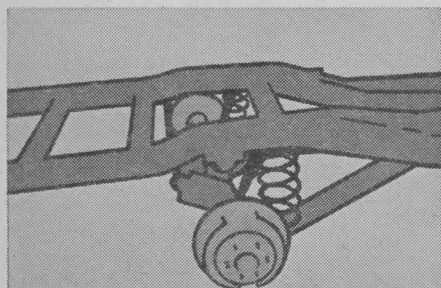
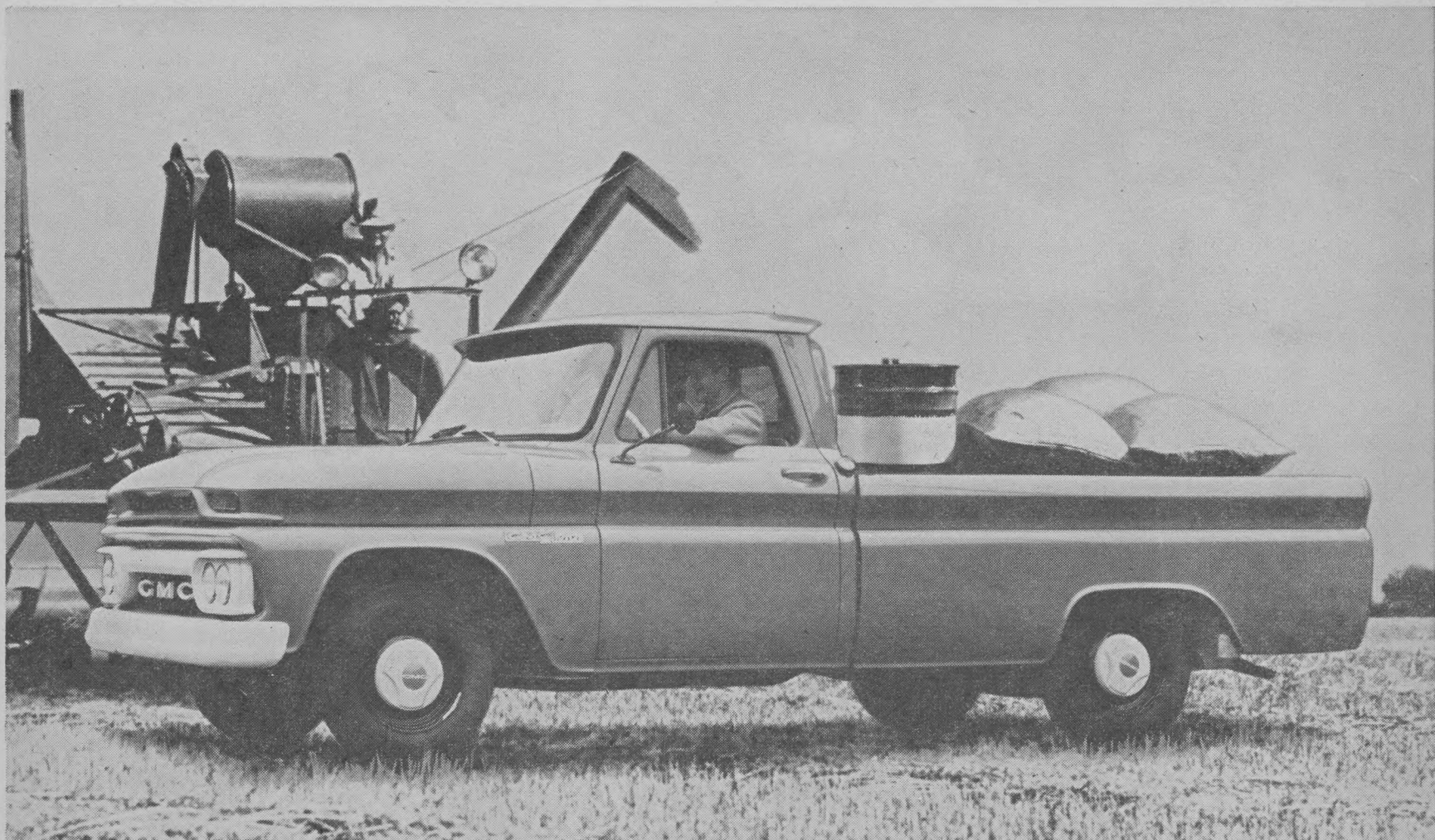
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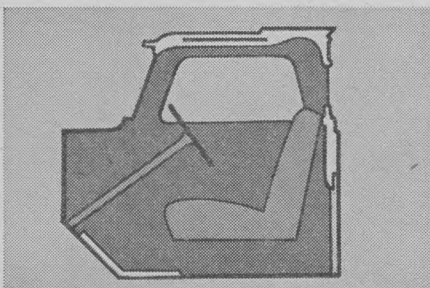
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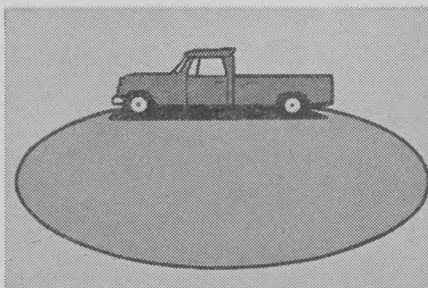
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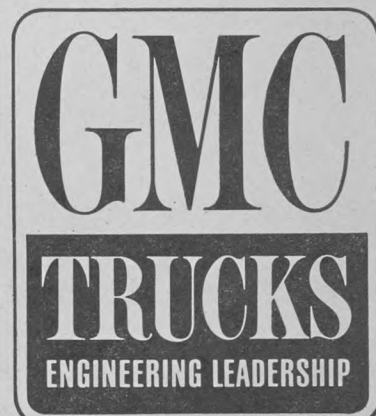
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## Healing Substance In Preparation H Shrinks Piles

Exclusive Healing Substance Proven To Shrink Hemorrhoids And Repair Damaged Tissue.

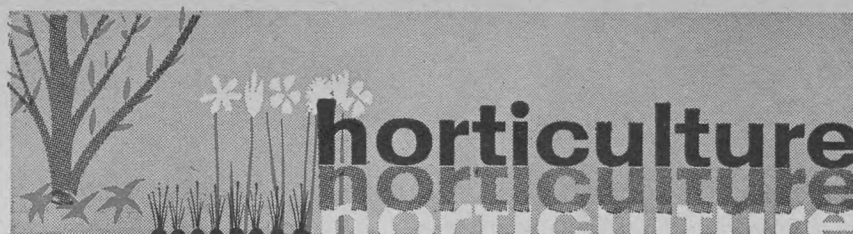
A renowned research institute has found a unique healing substance with the ability to shrink hemorrhoids painlessly. It relieves itching and discomfort in minutes and speeds up healing of the injured, inflamed tissue.

In case after case, while gently relieving pain, actual reduction (shrinkage) took place.

Most important of all—results were so thorough that this improvement was maintained over a period of many months.

This was accomplished with a new healing substance (Bio-Dyne) which quickly helps heal injured cells and stimulates growth of new tissue.

Now Bio-Dyne is offered in ointment and suppository form called Preparation H. Ask for it at all drug stores—money back guarantee.



## Select Tomato Seed Early for Best Results

FOR successful tomato growing, select your seed early, says T. A. Sandercock, vegetable specialist of the Manitoba Department of Agriculture. Of bush and staking types, the former requires less care but in terms of earliness, there is little to choose between the two.

If you seed indoors and put the seedlings outdoors when there is no risk of frost it takes about 7 weeks to produce a satisfactory plant. In this case seeding should take place about April 1 for planting outdoors the last week of May. If you plan to seed indoors and put seedlings out under hot caps when growing conditions are satisfactory, seed around April 15 and move plants outdoors between May 15 and 20, in Manitoba.

Mr. Sandercock suggests either sand or vermiculite for planting. When seedlings reach the first leaf stage, transplant into flats containing a suitable soil mixture. Space them about 3 inches apart. Mr. Sandercock suggests small individual "jiffy" pots for home gardeners because there is minimum damage to roots when plants are put into the garden.

Germination, he says, is most successful when soil temperature is between 65° and 75° under full light. With less light, temperature should be reduced slightly to compensate for the deficiency. Plantings should not be overwatered at this stage.

To harden off the plants prior to moving them outdoors, reduce moisture supply to slow their growth. Don't be too drastic, however, because you may stunt their future development.

Tomatoes fare best in an area that offers protection from strong cool winds but also provides adequate air circulation.

To encourage rapid root development and reduce the shock of transplanting, he recommends an application of a high phosphate fertilizer (11-48-0 or 10-57-17) on the basis of one tablespoon of 11-48-0 per gallon; use 10-57-17 as indicated on the package. Granular fertilizers should be kept away from direct contact with roots.

## Perennial Asters for Prairie Gardens

PRAIRIE gardeners will welcome the six perennial asters that have been developed at the Morden, Man., Experimental Farm. Earlier-blooming than older varieties, four are Michaelmas-daisy types; the other two are New England asters. They are:

**Sunup:** This variety grows 3½ feet high and produces a profusion of

rich pink flowers in mid-September, 7 to 10 days earlier than its parent.

**Morden Lavender:** Seldom exceeding 1½ feet in height, this variety gives masses of lavender blue flowers from mid-September until the first severe frost.

**Morden Cupid and Morden Fay:** These sister selections are compact plants about 6 inches tall. Cupid bears white, orange-centered flowers. Fay flowers are a pleasing shade of lilac pink.

**Morden Crimson:** This variety produces dense heads of rosy-crimson flowers on a 5-foot stem.

**Morden Purple:** A 5-foot type, it has large purple flowers with orange centers.

## Tomato Varieties

VISCOUNT and Vantage are two new tomato varieties developed by the Ontario Department of Agriculture. A bush variety, Viscount ripens evenly. It produces a very smooth, thick-walled red fruit with a small core. Its shape and crack-resistance qualities make it suitable for both home and market gardens. Vantage produces solid, attractive red fruits of medium size. Both are resistant to leather top.

## Control Leaf Diseases

"RESIDENT" antagonistic micro-organisms may soon have to be added to the farmer's glossary of familiar terms and descriptions. Dr. Curt Leben, Plant Pathologist at the Wooster, Ohio, Experiment Station, has brought biological balance a stage nearer practical field use. Leben's work may lack the fanfare and drama of the current noisy pesticide debate but it could be one of the really significant research successes of recent years.

Leaf spots, rusts, smuts and blights can be caused by various types of micro-organisms. Leben has been isolating micro-organisms, culturing them and spraying them on plants. If they multiply on the plants he terms them "resident."

In research work with cucumbers he has succeeded in identifying one such organism which will multiply on the leaves of the plant and "fight" other micro-organisms. The healthy plant can then grow free of disease. Just how this happens is not yet determined but Leben suspects the development of an antibiotic is responsible.

Cucumbers are used in the experiment as they are easily managed plants for greenhouse work, but the implications are there for similar uses with a wide range of crops.—P.L.

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YOU'VE EVER USED



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Tiredness, LOSS OF VIGOR

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Most men, if treatment is taken in time, can be successfully non-surgically treated for Glandular Inflammation. If the condition is aggravated by lack of treatment, surgery may be the only chance. The mild non-surgical treatment has proven so effective it is backed with a Lifetime Certificate of Assurance.

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"FLORAL CARPET"—Dwarf Hybrid Snaps, a rainbow of colour for bedding or borders.

"CLEOPATRA"—an early Hybrid Broccoli, dark green and uniform with amazing vigor, that tolerates cold and dry climates.

Plus many other proven varieties of flowers and vegetables for 1964.

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# '63 TESTS CONFIRM AVADEX BW SUCCESS! CROP YIELDS HIGHER IN CEREAL GRAINS BY 40%

**Field Tests Conducted by Canadian Experimental Farms  
Demonstrate Monsanto Wild Oat Killer's Effectiveness**

CONCLUSIVE NEW EVIDENCE that Avadex\* BW wild oat herbicide increases yields of wheat and barley has recently come from the heart of Canada's vast grain-growing prairie provinces.

During the spring and summer of 1963, agricultural scientists at two Experimental Farms in Saskatchewan conducted a series of extensive field tests to determine how significantly wild oat control with Avadex BW affects per-acre crop yields. Monsanto's Avadex BW is already being widely used by farmers in the United States, Canada, Europe and Latin America to kill destructive wild oats (*avena fatua*) plants as they germinate in wheat and barley.

The results of these experiments were announced in December at the annual meeting of the Western Section of the National Weed Committee of Canada at Vancouver, British Columbia. The tests showed that, when properly applied, Avadex BW provided excellent control of wild oats and, more importantly, increased crop yields in the test fields as much as 40%. The Experimental Farm located at Indian Head, Saskatchewan, reported that Avadex BW applied at the recommended rate of 1 to 1½ Imperial quarts per acre increased wheat yields an average of 11 bushels per acre over adjacent "check" areas which were not treated with the chemical. Applications on wheat included both pre- and post-seeding treatments.

Barley, when treated *after* seeding at rates of 1¼ to 1½ Imperial quarts per acre, yielded approximately 17 more bushels to the acre than the untreated "check" areas (see Table I). Similar experiments conducted by another Experimental Farm at Regina, Saskatchewan, confirmed these results.

Basic test conditions were the same for the entire series of Avadex BW experiments. Pembina wheat and Parkland barley were used in all tests, and planted to a

TABLE I: Wild Oat Control and Yield Data				
Application: Quarts Per Acre	WHEAT		BARLEY	
	Wild Oat Count Per Square Yard	Yield in Bushels Per Acre	Wild Oat Count Per Square Yard	Yield in Bushels Per Acre
Avadex BW @ 1	4	38.7	2	56.5
@ 1¼	1	38.8	1	58.5
@ 1½	2	40.7	3	59.6
Check (Untreated)	117	27.8	99	41.7

(Source: Experimental Farm, Indian Head, Saskatchewan, Canada)

depth of three inches. To keep the degree of weed infestation common in each plot, scientists sowed the same amount of wild oat seeds in all areas under test. The land was summerfallow ground which had received no preparatory spring tillage. Avadex BW was sprayed at various rates using 5¼ Imperial gallons of water per acre. The chemical was immediately incorporated into the soil with two harrowings either before or after seeding the crop, depending

upon the particular test being conducted. Growing conditions were favorable over the entire season with precipitation above normal (an ideal condition for the growth of wild oats).

At Regina, scientists conducted a separate series of tests to determine the importance of harrowing to an Avadex BW treatment in wheat. They found only a slight difference in wild oat control between incorporation with one or two harrowings, as the data in Table II indicates. However, to insure adequate soil incorporation in summerfallow ground—and maximum kill of wild oats—Monsanto scientists recommend two harrowings for best results.

The scientists managing these tests were careful to follow correct application procedures recommended for Avadex BW. They applied the chemical when the soil was in good working condition, used the right spray pressures and nozzles, set the spray boom at the best height to assure good coverage. And, they made sure the chemical was well incorporated into the soil immediately after spraying. As with most agricultural chemicals, proper application is the key to success with Avadex BW.

TABLE II Effect of Soil Incorporation on Wild Oat Control and Yields		
Treatment	Wild Oat Count Per Square Yard	Wheat Yields in Bushels Per Acre
Avadex BW— harrow once	9.9	47.0
Avadex BW— harrow twice	5.1	47.6
Check (Untreated)— harrow once	73.8	30.2

(Source: Experimental Farm, Regina, Saskatchewan, Canada)

\*Trademark registered—Monsanto Chemical Company



## HORTICULTURE

### Tastyvee Seed Available This Year

**T**ASTYVEE is an attractive new hybrid sweet corn that has exceptionally high eating quality. It was named by Dr. E. A. Kerr, Chief Research Scientist, Horticultural Experiment Station, Ontario Department of Agriculture, Vineland Station, following extensive tests under the breeding number VH605. Early work on the development of the inbred lines used to produce Tastyvee was to a great extent done nearly 20 years ago by L. H. Lyall, Canada

Department of Agriculture, Ottawa, and W. J. Strong, Ontario Department of Agriculture, Vineland Station.

Tastyvee is a midseason hybrid maturing with Seneca Arrow or about 2 days after Barbecue and 3 to 4 days after the open-pollinated variety Golden Bantam.

The ears are 7½ to 8 inches long and have 12 to 14 rows. Two marketable ears are often produced on a plant. The plants also form several tillers which usually bear ears of sufficient size for home use. Tastyvee can frequently be distinguished from

other varieties by a tinge of purple on the husks.

It retains its high eating quality for an exceptionally long time. Ears which appear to be well past optimum maturity are still tender, sweet and flavorful.

In freezing tests for the past 8 years at the Ontario Horticultural Products Laboratory, Vineland Station, Tastyvee did well in both whole-kernel and on-the-cob packs.

Seed of the new variety is available from commercial seedsmen for planting in 1964. V

### Packaging Key to Fruit Sales

**T**HE 6-quart basket is often maligned but it is also enduring.

Probably no other piece of equipment, developed at the turn of the century, has enjoyed such prolonged use by fruit growers and shippers. It was popular in an era of large families and prodigious exploits in home canning. However, it falls short of today's standards.

Some exciting new ideas in fruit packaging have resulted from a pilot project (a co-operative effort of Niagara Fruit Orchards Limited and the Horticultural Experimental Station at Vineland) carried out last year.

Pears and peaches, in trial 2-quart trays, were prepared for shipment from Beamsville to points like Calgary in the west and St. John's in the east where they won a favorable reception. Trial shipments have gone as far afield as Austria and Finland.

The fruit is protected from prying fingers in the food stores by a light film of plastic which is left open at the ends to permit the fruit to breathe. The master containers are cardboard and are re-usable. They contain either 8 quarts of Loring peaches packed in 2 layers, or 6 quarts in a single layer tray of the larger Bartlett pears.

The pilot project brought these factors to light:

- The consumer wants a container that can be placed in the refrigerator.
- The 6-quart basket which hides 80 per cent of the fruit, is suspect, apart from being too large for many shoppers.
- Consumers will pay a higher price per pound for the quantity they consider sufficient to their needs.
- There is a largely untapped market for packages of mixed fruit.
- With selected, more expensive produce, a brand name is essential for repeat business.
- Adequate and prompt cooling is a necessity.
- An attractive package results in impulse sales.

New marketing ideas rely for their success upon the close co-operation of producers, packers and retailers. This has been forthcoming in the Niagara Peninsula and the indications are that the lessons learned this year will have a profound effect upon future fresh fruit packaging. As the participants in the new packaging venture observe, "If we don't move with the times the Canadian consumer will get along quite well without us."—P.L. V

### Garden Parade

**T**HE great majority of prairie dwellers engage in the ever fascinating and never ending pursuit of improving their home gardens. All seek new kinds of plants, improved methods in their culture, and distinctive schemes for changing the landscape picture on their patch of garden ground.

Citizens on the north Great Plains will shortly be able to secure The Prairie Garden, 1964. It is due to be distributed in late February. One dollar mailed to The Prairie Garden, 92 Queenston Street, Winnipeg 9, Man., will bring it postpaid. The printing has risen from 1,500 copies 10 years ago to 16,000 this year. The wide demand for this annual book, of 140 pages, is evidence that the ancient practice of tending garden plants is thriving on every hand.

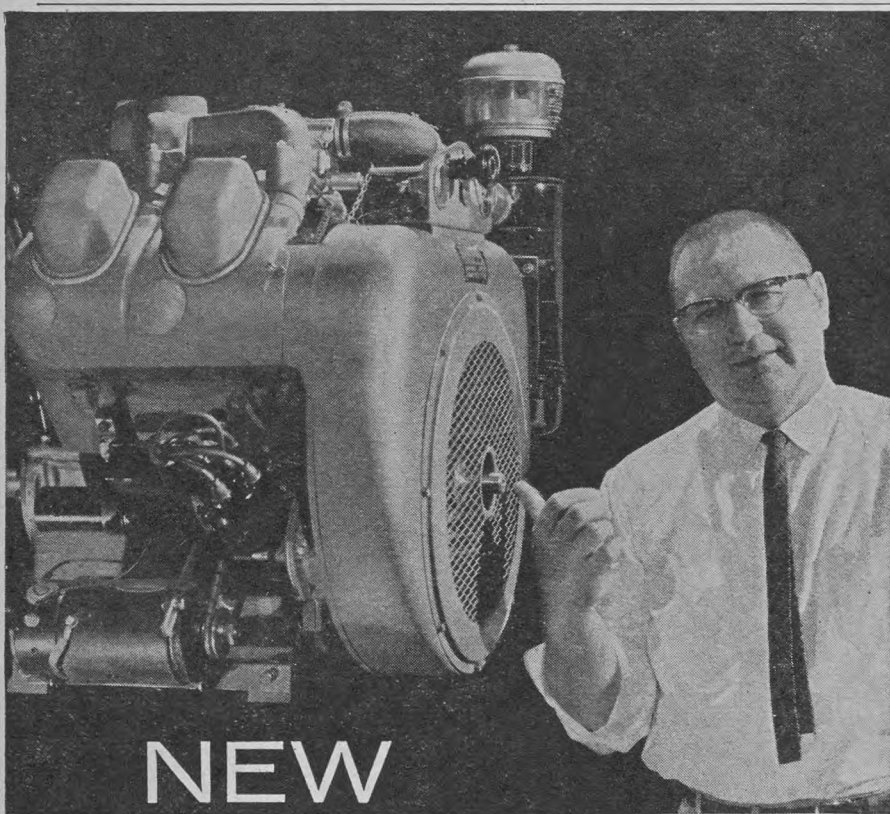
Although The Prairie Garden is tailored for the Great Plains country, it is distributed far and wide. Gardeners in regions with longer growing seasons find they can adopt with confidence those items mentioned as only partially proven for the prairie provinces. The whole gamut of garden subjects — fruits, vegetables, trees, shrubs, vines, flowering plants, house plants, and flower arrangements — are found in the 1964 book. Sold at cost of publishing, its purpose is to bring fresh help to fellow gardeners. Multitudes are building up practical reference garden libraries by acquiring these annual books each year. While former issues are out of print, a small supply of 1962 and 1963 issues is available at the clearance price of 50 cents. V



[Guide photo] O. A. Bradt of the research staff at Vineland Experiment Station examines a peach variety which is growing in popularity. The Baby Gold series of canning cling-stones was originated in New Jersey, U.S.A.

### Keeping Cantaloupe

**C**ANTALOUPE, and other melon varieties, should be stored at 40° to 50°F., which means no refrigeration except to chill the melon for immediate dessert use. The Ontario Agricultural College says that longer refrigeration below 40° produces pitting and surface decay. Symptoms of deterioration are softening, surface breakdown, and off-flavors. V



# NEW

## 60.5-hp model V-461D

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## Frost Shield Generator in Action

**C**OUNTRY GUIDE has followed the development of Lloyd McSorley's chemical frost "shield" process with interest for about 5 years. He started with a tractor attachment generator which will effectively cover about 20 acres. Last fall, Lloyd and his assistant, Cliff Edey, conducted tests in the tobacco and market garden areas of southern Ontario (The Country Guide, November 1963). This time, they used a big generator that can pour out enough chemical fog to protect up to 400 acres.

**E**VER since McSorley perfected his fog mixture, he has traveled throughout North America demonstrating his process and explaining his theories of frost protection. His system is based on the theory that frost damage occurs in the thawing out process during the first 2 hours of sunlight. The idea seems to be catching on. Agriculture officials in both Canada and the United States are interested. There have been enquiries from Mexico and South America. An insurance company is willing to insure the effectiveness of the process up to several degrees of frost.

Any worries a grower might have that the chemical fog will harm his crops, or produce harmful residues, have been dispelled by the fact the product has been cleared by the Food and Drug Directorate, Department of Health and Welfare. That the process is cheaper and more convenient than the time-honored smudge pot is

this frost control technique, here is what is involved.

For equipment, you will need a commercial pressure tank, 2 to 5 gallons in size. Fill the tank to the two-thirds mark and pump it up to 15 or 20 lb. pressure, much as you would a gasoline lamp. You operate by opening a valve which releases the fluid through a jet inserted at the hottest point of your tractor's exhaust manifold. This hand-operated valve and the size of the jet are the only control on the volume of fluid released.

In the United States, the Bessler



[CBC photos] Ontario farmer Lou Davis looks on while Cliff Edey operates the Bessler generator which will cover 400 acres. Chemical fog is spread thickly on crops.

Corporation produces a stationary smoke generator. Lloyd's fog-producing chemical is being made under license by a U.S. firm, but he retains the rights for all of North America.

The Frost Barrier method could prove to be a real breakthrough in the fruit and vegetable grower's constant battle with unseasonable frosts. —C.V.F. V

## Blast Yourself a Pond

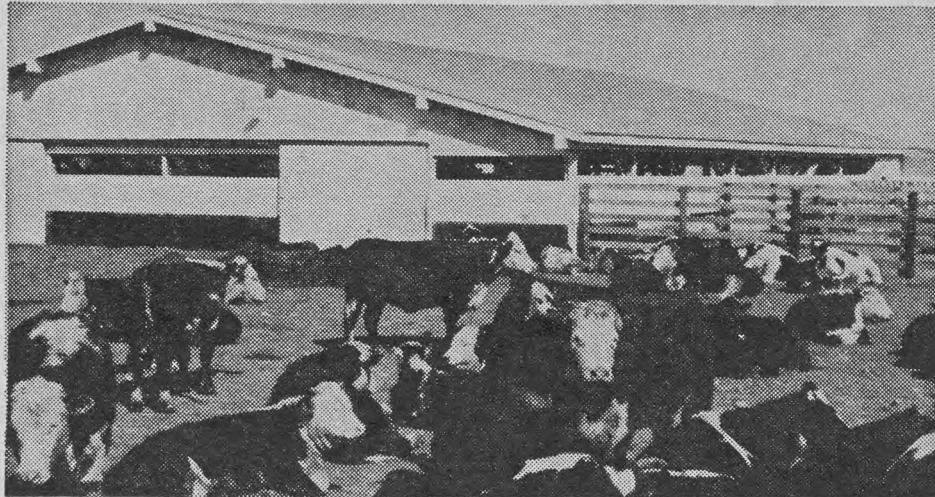
**I**F you want a farm pond in a hurry, this technique developed by engineers at Macdonald College, Que., may come in handy.

Plastic bags containing 50 lb. of blasting agent, AMEX II, are placed at intervals of about 10 feet and at a depth of 6 feet along the center of the area in which you want the pond. One stick of ditching dyna-

mite activated with an electric blasting cap is placed with each bag of AMEX II. The blasting caps are wired in a series and the activated charges covered with earth. From a safe distance of about 1,000 feet the blast is set off by passing an electric current through the lead wire and blasting cap circuit. When the dust has cleared, in a matter of minutes, the pond has been dug.

The cost of the blasting materials for this method may be as little as

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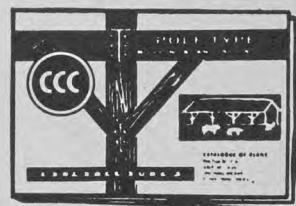
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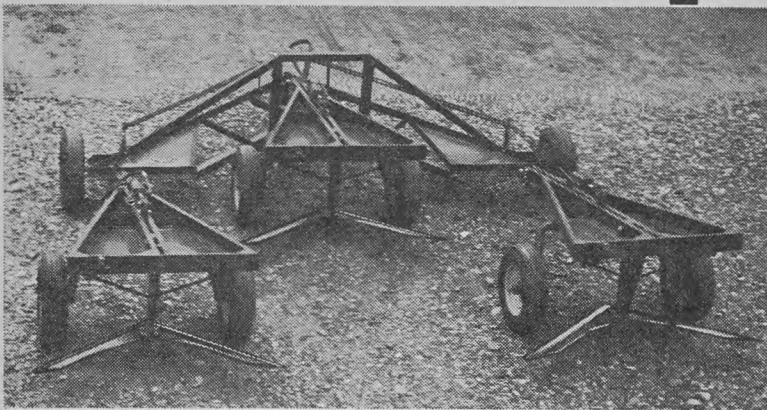
Lloyd McSorley demonstrates tractor attachment which is only recommended for small fields of 20 acres.

shown by the following comparisons: Using the Frost Barrier Method for 3 hours at sunrise on 20 acres with a tractor exhaust manifold generator will cost about \$1.62 per acre; the big field generator on 400 acres, for the same period, costs \$6.75 per acre. For Smudge Pots, using 50 pots an acre and smudging for 7 hours costs about \$33.75 per acre; using 150 pots per acre can cost as much as \$101.25 an acre.

For those who are interested in



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## FARM MECHANICS

12 cents per cubic yard of earth excavated. The pond can have a depth of 15 feet, a surface width of about 40 feet and any length desired. The length is dependent on the number of charges used.

A pond of 1,000 cubic yards capacity may be dug by the blasting method for as little as one-third or

one-half the cost of the equivalent machine-dug pond. The blasting method is restricted to sites 800 feet or farther from buildings because of the blast shock and the movement of earth in the air during blast.

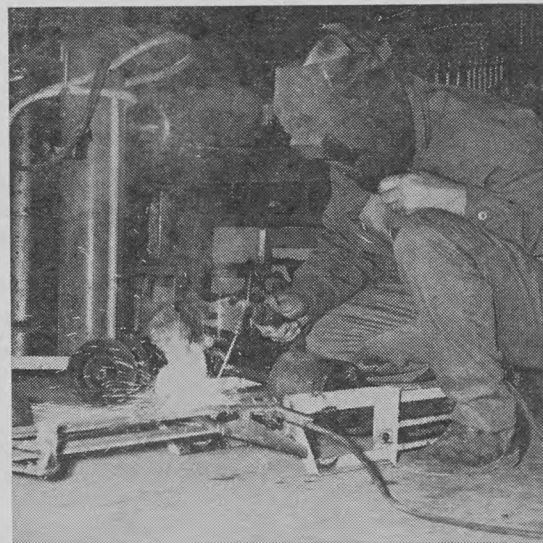
A bulldozer is not required to move earth away. Excavated material is spread during the blast. V

## . . . with Body by Boese!

**G**OOD farm management: some preach it, many strive for it and some, like Isbrand Boese of Port Dalhousie, Ont., just do it. With 140 acres in orchards (mostly peaches but also some cherries, pears and plums) Boese can't afford mechanical breakdowns when the fruit is ripe. Boese has a fleet of sedans, coaches and a panel truck all modified for use in the orchards, where their low height permits easy access without damage to the trees. "The best time to buy a used or wrecked car is just before freeze up," says Boese. "The dealers are ready to sell cheaply then.

I get vehicles of the same make, and when buying several, I have had one thrown in for just a dollar. I can usually buy what I want for \$40-\$50 each.

Good buying is the first step; a good workshop is the second. Boese has an excellent workshop, with all the necessary tools neatly arranged. Overhead is a parts storage with water pumps, carburetors, clutches and starters ready for installation. These are all cheaply salvaged from wrecks and keep seasonal breakdown losses to an absolute minimum. —P.L. V



Isbrand Boese has a well equipped workshop and overhead storage for replacement parts.

Most of the seasonal help are German Hutterites who left Western Canada for Mexico and return for the Ontario harvest. No time is lost in transporting the men to and from the orchards.



[Guide photos]

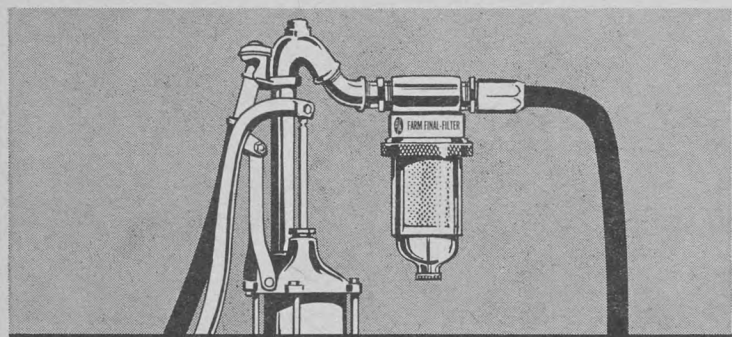
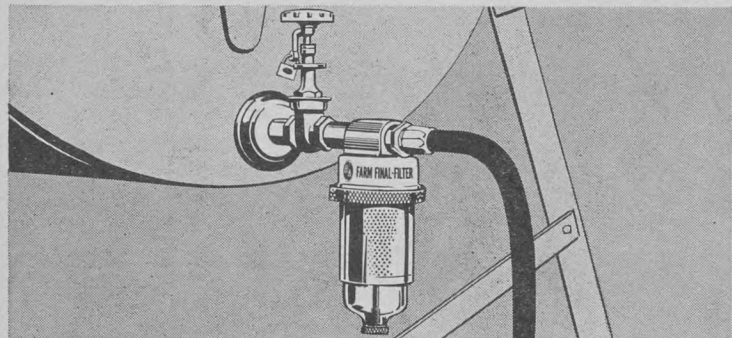


Boese inspects a load of 80 11-quart baskets as it comes in from the orchard. The packing shed in the background was re-built from the old St. Catharines curling arena, which was partially destroyed by fire.



**SPECIAL INTRODUCTORY OFFER**

# New B-A Farm Final-Filter



## Eliminates water, dirt and dust from gasoline and diesel fuels

Now, B-A brings you a Final-Filter especially designed for farm use. This high-capacity filter with replaceable cartridge is easily installed on your pump or gravity feed storage tank.

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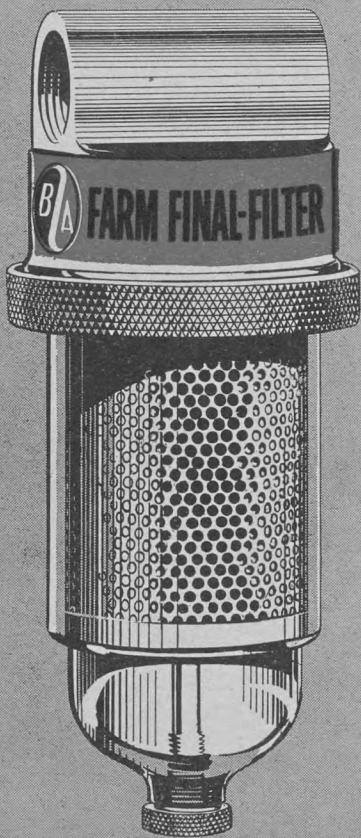
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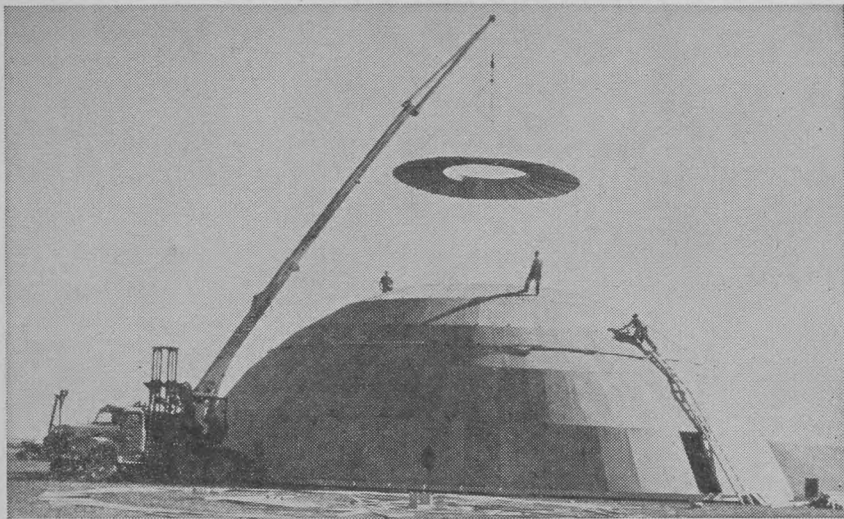


Distributor



# FARM BUILDINGS

## More About Dome Barns



Grain storage dome being built near Madison, Sask. Will hold up to 60,000 bu. [Guide photo]

On the Madison Holding Company farm, 3 miles north of Madison, Sask., a Heiber dome barn (The Country Guide, July 1963) has been built as a grain storage unit.

It has a diameter of 80 feet, a height of 28 feet and contains 5,028 square feet of floor space.

Because of the stresses involved in this type of use, it was decided to

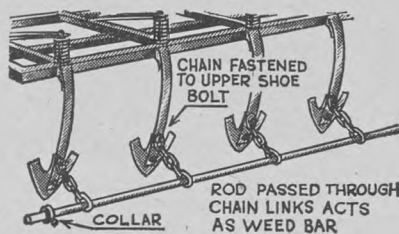
divide the interior of the dome into seven separate bins and double the number of vertical rafters. A circular bin, 37 feet in diameter and 20 feet high, was built in the center of the dome. Then the remaining space was divided into six pie-shaped bins by building a series of bulkheads out from the central bin to the dome wall like the spokes of a wheel. These bulkheads are removable so that space not needed for grain can be used for other storage.

It is estimated the Heiber dome will hold about 60,000 bushels with no divisions, and over 50,000 bushels when subdivided. This is about equal to the capacity of twenty 2,500-bushel bins. The dome is cheaper to build and maintain and can be filled with one setting of your grain auger. To fill 20 small bins you would have to move the auger 20 times, and they couldn't double as machinery storage units when not being used for grain. —C.V.F. V

## WORKSHOP

### Simple Rod Weeder

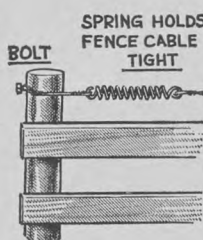
A simple rod weeder can be made by attaching a rod to your chisel plow by means of several chain links. Take



a rod the same width as the plow and with 3 or 4 chain links slip the last link onto the rod and bolt the first link to the upper bolt on the shovel shanks. To keep the rod in place attach a collar about a foot in from each end.—J.W., Alta. V

### Electric Fence Tightener

When tightening an electric fence try using a small heavy duty spring between the cable and the fence post as shown in the sketch.—J.M.H., Man. V



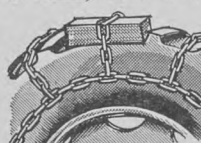
### Handle Saver

You can avoid snapping wooden hammer handles and at the same time give yourself extra leverage when pulling out tough nails if you use a length of pipe. Slip the pipe over the face of the hammer as shown in the diagram and it works quite well.—A.N.F., N.B. V



### Prevents Slippage

If you ever get stuck in deep snow or mud, here is an idea which may help to get you out. Simply wedge a block of wood underneath the chains on the wheel that is stuck. The block grips hard and prevents the wheel from slipping.—D.H., Man. V



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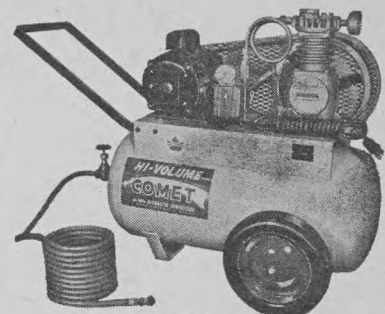
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## Why you'll be money ahead to kill wild oats this up-to-date way come spring:

As you can tell from the photo above, the results of spraying Carbyne are easy to see. The unsprayed strips (light colored) are thick with wild oats. The rest of the wheat is clean. Carbyne made the difference. It kills wild oats *after* they come up.

In the last three years, farmers have proven Carbyne's effectiveness on more than one million acres of crops. The pay-off is cleaner fields and bigger yields.

### What about cost?

Wild oats are costly weeds. On the average, a wild oat infestation cuts crop profits by a good \$7 an acre. On the other hand, the cost of Carbyne to kill wild oats usually runs about \$3 per acre. That's better than \$2 back for each \$1 you invest. There are other benefits, too.

### Pays Several Ways

Killing wild oats by spraying Carbyne cuts down future wild oat infestation. It makes row crop cultivation easier. It reduces competition for moisture, fertilizer and natural soil nutrients.

With Carbyne in your plans, there's no need to delay seeding to plow under that first stand of wild oats.

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One spraying at the right time does the job. Just follow the label instructions carefully. That's important. So, don't be trapped into a last-minute rush. Right now is the best time to get acquainted with Carbyne. Pick up your free copy of the fact-filled 1964 Carbyne folder (shown below) this week.

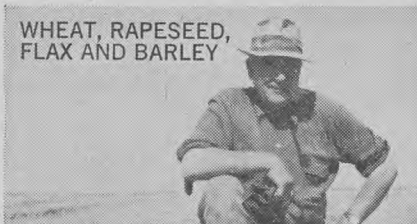
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Read how these Carbyne users got cleaner fields; bigger yields:

WHEAT, RAPESEED,  
FLAX AND BARLEY



"I've used Carbyne on nearly 500 acres of wheat, barley, flax and rapeseed over the past four years. Results have been very good. Carbyne kills wild oats. I'll use it again whenever I have wild oats. Carbyne pays off."

J. Russ Turner, Drumheller, Alberta

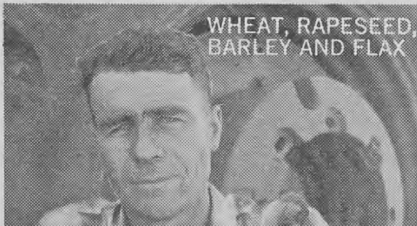
WHEAT, BARLEY  
AND RAPESEED



"We had excellent results with Carbyne on wheat, barley and rapeseed over the past two years. This year, we were faced with plowing down a 60-acre field of Herta barley because of a very heavy infestation of wild oats. We sprayed with Carbyne and it saved a real good crop for us."

Robert W. Lowe, Lenswood, Manitoba

WHEAT, RAPESEED,  
BARLEY AND FLAX



"We have used Carbyne for four years on wheat, rape, barley and flax with very good results. I like to seed early to get best yields and then use Carbyne to control wild oats where they appear. I wouldn't be without Carbyne. It's saved me a lot of money."

Herve Casavant, Tisdale, Saskatchewan

### SOME INTERESTING TWISTS ABOUT WILD OATS

Wild oat seeds can actually plant themselves. Moisture and temperature changes cause the long awn to rotate and move the entire seed in a twisting, burrowing fashion. They may lie dormant up to ten years, but enough sprout to cause serious infestations nearly every season.



Young wild oat plants are sometimes hard to identify in grain seeded with a "one-way." You can tell them apart by the twist of the leaves. The first full wild oat leaf has a counter-clockwise curl. In contrast, wheat and barley leaves curl clockwise.

Carbyne is a registered trademark of Spencer Chemical Company, Kansas City, Missouri



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## GEHL Cure-All

*Every round proves it!  
No wrapping...No clogging*

If you think all hay conditioners are alike — look at the Gehl Cure-All.

Gehl has added a third universal joint to the PTO shaft so those extra tight turns are easy on U-joints and bearings. Also, you can turn the new reversible transmission to step down the higher PTO speeds of some tractors. No extra power transfer devices needed. Of course, the Cure-All still gently pops stems from bud to butt. Lays down a fluffed swath with leaves protected. Gives wrap-free, non-stop conditioning.

The Cure-All is the kind of hay conditioner you'd expect from Gehl — the leader in forage handling equipment.



Three U-joints in PTO shaft permit shorter, safer turns.



Reversible transmission steps down the higher PTO speeds of some tractors.

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NORTHWEST FARM EQUIPMENT LTD., Corner 7th Ave. & 6th St., East Calgary, Alberta  
D. N. JAMIESON & SON LTD., 791-3 Erin St., Winnipeg, Manitoba

# WHAT'S NEW

## Fertilizer Spreader



The new 300 Spin Spreader is ground driven and has a spread area of 60 ft. It holds 3,000 lb. fertilizer without extensions and has an application rate of from 35 to 2,000 lb. per acre. (John Deere and Company) (450) ✓

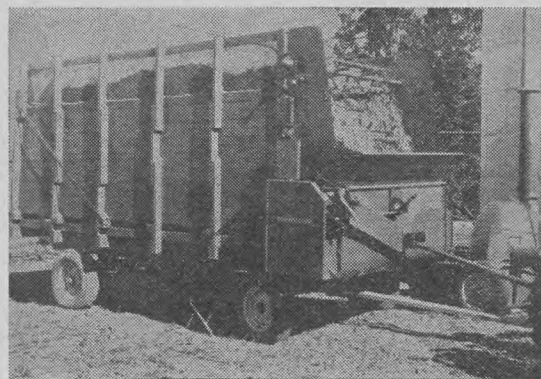
## Power Mixer

This PTO driven mixer and mill incorporates a 20-inch hammermill, a 24-inch mixing hopper base and a 7-inch unloading auger. Manufacturer claims unloading time of a complete batch to be 5 minutes. (Owatonna Manufacturing Co. Inc.) (451) ✓

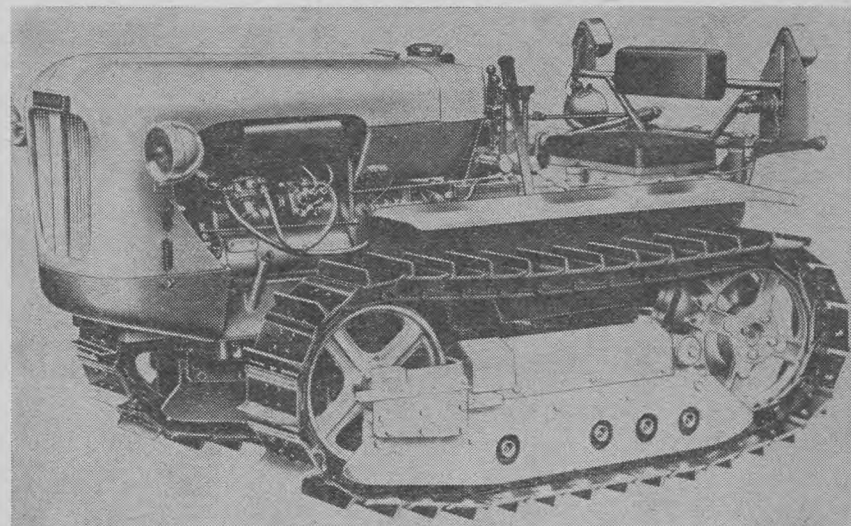


## Versatile Forage Box

Farmers can build their own forage box from this Model 7 Forage Box Kit. The new model has a capacity of 410 cubic feet, and can be converted to a self-unloading bale or corn wagon, simply by removing the beaters. (New Holland Machine Co.) (452) ✓



## Small Crawler



The new Lombardini C-24 crawler weighs 2,800 lb., and has a 24 hp. air-cooled diesel engine with 8-speed transmission. Overall dimensions are 40.1" x 77.5" x 38.5". (Burton Supply Co., Inc.) (453) ✓

For further information about any item mentioned in "What's New," write to WHAT'S NEW, Country Guide, 1760 Ellice Ave., Winnipeg 21, Man. Please quote the key number that is shown at the end of each item.



# THE SIXTH VIOLIN



by **CLIFF FAULKNER**

Illustrated by **PIERRE**

The story thus far . . .

As concert violinist David Kaufman prepares for another of the performances that have made him famous, he suddenly feels he would gladly exchange places with any one of the people he sees from his hotel room window. Just then an express package from Mexico City arrives. It contains a battered, badly worn violin case. Inside, he finds a violin that sends an eerie prickling along the base of his scalp.

The violin revives memories of his boyhood friendship with Albert Werner, a strange old man with a heavily accented voice who lived at the end of the Bay road. He relives the bleak moments in those war-shadowed years when he sees his old friend's home and all its contents reduced to ashes by a mysterious fire.

Most people in the community had looked upon Albert Werner as something of an eccentric but David remembers his kindness, his encouragement, his handmade violins and the strange reserve that kept him walled off from everyone.

## Part 2

**I** SOON found all talk of Europe and the war upset my friend and so I avoided it. We spent many happy hours in the dinghy, navigating the tricky, tide-swept channels of the Sound. The music then was the steady "chunk-chunk" of the little inboard, mixed with the screams of gulls that wheeled gracefully overhead. Sometimes we'd tramp through the woods. Here, Werner would show me how to pass through the heavy growth without leaving a trail that man or beast could follow.

By this time, one more instrument had been added to the cabinet shelf. It was a Stradivari type of violin of the typical Cremona pattern, and had a soft, appealing tone. My friend would listen intently while I played it, then shake his head. Out would come his notebook and he'd draw a series of odd sketches on the paper. He was convinced he could do a much better job than this.

"It's a wonderful violin," I once ventured.

But he just shrugged impatiently. "For one so young you are a wonderful player."

When I was leaving, Werner handed me the violin. "Take it," he said, "it is yours."

I tried to thank him but he waved me away. "I will make others. And some day I will hit the right combination. The tone will range so wide and so deep it will always be a challenge to the man who plays."

At home, my mother examined the instrument with a practised eye, and a trace of her native skepticism.

"It's a good violin," she finally admitted, "but I have seen better. When you are ready, Davie, it will have to be a Stradivari. Who ever heard of a Werner?"

On my next visit, Albert Werner took me into the workshop behind his house. Inside, the air was fragrant with the perfume of seasoning woods, some of them unfamiliar to me. My friend indicated some pieces lying on his bench.

"For my sixth violin I will use woods that grow right around this place," he announced. "First, the back," and with a stubby forefinger he pointed to a clear piece of Oregon maple. It had a broad

strip of darkened heartwood in the center which gave a two-tone effect.

"This Western maple now," he went on, "it is not as strong as that of the East Coast perhaps, but it is softer and finer grained. As for the belly—for this I shall use Western white pine, honed to the resonance of a conch shell."

He held up a small block of hardwood for me to see. It had an odd, wavy grain. "You know this one?" he asked.

I shook my head.

"Madrona," Werner said with satisfaction. "You remember that funny tree on the shore which sheds its bark instead of the leaves? That is madrona. Some people call it arbutus. Hard like iron it is when seasoned well. This I will use for the neck and pegs."

"It will be a modern violin, this one," he continued. The neck will be longer than most violin necks. It will also have a stronger bass-bar to give the wide range and raised pitch of violin music today."

I was surprised at his thoroughness in thinking out every detail, and said so.

"Pooh, that is only the beginning," he told me. "There is still the varnish to consider, and this is the most important thing of all. For years I have been busy on it. Now at last, I have an oil varnish that will do the trick. This I shall dry slowly—very slowly—until it seeps right in and becomes a part of the wood."

He smiled suddenly. "Then, young man, we will have a violin!"

(Please turn overleaf)



(Continued from page 57)

It wasn't long after this talk in the workshop that I found the map. Werner had sent me to look in the big cedar chest for a block of ebony he'd been saving to make finger boards. The roll of paper was too much for my curious nature, so I opened it up. It proved to be a detailed map of the Sound area, with red pencilled circles at various points.

My first warning of Werner's presence was a muttered exclamation behind me. The map was wrenched from my hands. "I sent you for a block of ebony," he said angrily. "I

cannot wait around while you look at maps."

This was the only time my friend had ever lost his temper with me.

"I've always been interested in maps," I said in apology. "I didn't think you'd mind."

Werner's anger disappeared as quickly as it had come. "Yes," he said gloomily, "it is a good map, that one. I looked at many places before I decided to settle here."

Until then I'd never suspected the tension that lay behind my friend's calm face and deliberate movements.

As the tempo of war in Europe increased, his anxiety began to show on the surface in many little ways. Sometimes he would lift his head suddenly and cock an ear as though listening, or stop talking in mid-sentence and peer down at the Bay. It all came to a head one Saturday morning in December.

For many days a heavy pall of fog had blanketed the Sound ports. Our visible world was reduced to a circle of about a hundred feet. Beyond this gray wall, once familiar objects loomed shadowy and strange. On such days, I loved to tramp along

the shoreline. The fog gave me a secure, closed-in feeling. It was like walking in a private world which thrust its changes on you slowly, step at a time.

**O**FTEN the fog would thin and I could see for several hundred yards. Then the wall would close in again, tighter than before. It was during one of these clear periods that I saw the submarine—a long, sinister shadow moving slowly, close inshore. A moment later it disappeared, leaving me to wonder if it had only been an illusion of the fog. Submarines were common enough in the Sound, but I'd never heard of one coming into Chehalis Bay.

Just ahead of me a jagged stump loomed Druid-like out of the mist near the water's edge. Long action of the sea and sun had bleached it to a silver gray. As I dropped down on one knee to take a stone from my shoe, I heard a new sound—sharper and closer to hand than the others. Soon there was no mistaking the steady "clink-thunk, clink-thunk" of muffled oarlocks. The unseen rower seemed to be headed directly my way.

Seconds later, a small dinghy emerged from the fog. It carried two men. The one plying the oars stopped for a moment, and both of them surveyed the beach carefully. They were dressed in the usual fishermen's gear, and close enough for me to see they were Japanese. For some reason I felt a menace in their presence. I stayed crouched down, hidden from them by the big stump.

At a sharp word from the man in the stern, the oarsman started rowing again. They appeared to be headed for a spot about a hundred yards up the beach. Just when I expected to hear the sound of their keel grating on the shore, the boat and its passengers disappeared suddenly from view. It was a couple of seconds before I realized I'd come as far as Werner's creek.

Gripped by some strange impulse which told me Werner was in danger, I cut through the trees to the boathouse. I reached the edge of the clearing in time to see the two visitors disembark from their dinghy. On the dock stood Albert Werner, his hand raised in greeting. Apparently the men had been expected. Each raised an arm briskly in reply.

Something about the scene was vaguely disturbing — like the half-remembered fragment of a bad dream. A cold shiver passed through me. It was as if . . . what was it Grandpa Kaufman used to say? "As if somebody had stepped on my grave." Had I imagined their gesture to be unnaturally stiff and precise—like salutes?

**B**UT this was ridiculous, I told myself. When I returned tomorrow for my regular weekly visit, Werner and I would have a good laugh at my expense.

Ashamed of my suspicions, I turned homeward. But that night my sleep was restless, full of crazy dreams. Ahead of me in the fog I could hear the steady crunch of footsteps. Dimly I could see the figure of a man as he moved rapidly away. I knew it was Albert Werner, but he seemed shadowy, unreal. Vainly



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I shouted, hoping my friend would wait. But he didn't turn around. Suddenly a submarine appeared close by, its ugly deck gun belching black smoke. The whole shoreline was afire. From away off, people were shouting . . .

"Fire, David! Wake up! Wake up!"

When I opened my eyes, my father was beside the bed. He was shaking me excitedly.

"Fire?" I muttered.

"That's what I'm saying, fire! A big fire, down at Werner's place!"

I was on my feet with a bound, my hands shaking as I fumbled for my clothes. All the vague fears of yesterday came rushing back. When we got there we found the whole place an ugly, smoking ruin.

The next day—Sunday, December 7th—the Japanese bombed Pearl Harbor. People had a lot more to talk about then than the disappearance of Albert Werner.

Later on, our local paper carried a story about a Nazi agent who'd been caught as he came ashore on the Atlantic Coast somewhere. The report said he'd been dropped from a submarine.

I was torn by indecision. Should I tell the police about the submarine I'd seen in the Bay? Suppose my friend had been murdered, and those men had set fire to his place to cover up? Then I recalled those gestures. They had been salutes all right. So in the end I said nothing. If Albert Werner was on the Japanese submarine it was too late for me to do anything.

I remember Sergeant Harrigan stopping me on the street about two weeks after the fire. "You were in the man's house a lot, son," he said, "did he have a radio set?"

"Yes, he did. But everybody on the Bay road has a radio," I pointed out.

"I mean a transmitter, boy. One that can send out stuff. We found a lot of parts in that rubble that you wouldn't need for an ordinary receiving set."

"I never saw any," I answered, truthfully enough. But when I had a chance to think it over I recalled a locked door in the attic that had never been opened while I was there.

WHEN a month passed and I still refused to touch a violin, my mother began to worry. Taking the one Werner had made from its case, she handed it to me. "Your friend would want you to play it," she said.

I laughed bitterly at that. Albert Werner hadn't cared about his violins, or about my playing. They were just a screen to hide his real purpose in living there.

"It wasn't made to be played," I told her. "It was only a stage prop."

Before she could guess my purpose, I took this last violin of Werner's and headed for the fireplace. To me, it deserved to share the fate of the other four. But my father got there first, and snatched it before I could toss it in the fire.

"We're so rich we can burn violins!" he cried angrily.

THAT was seven years ago. But the strange violin I now held pushed back the clock as if those years had never been.

It was a beautiful thing. As I idly touched the strings, my fingers told me the gut had a low elasticity. This, I knew, would dampen and enrich the tone. I could remember arguing this point with Albert Werner in his shop one day. Yes, this was violin number six, all right. Somehow Werner must have fled the district unseen. But why had he bothered to take the unfinished violin?

Even as I asked myself this question, I saw the answer. Albert Werner may have been planted as a spy, but violin-making was the work he considered the more important of the two. In that case, neither my friendship nor the violins had been stage props after all. This violin in my hands was proof of that. Suddenly I felt better than I had for many years.

Taking a bow from the table, I began to play. I was still playing when Rudy Brenner arrived.

"Where'd you get that thing?" His eyes had fastened on the new violin as soon as he entered the room.

"Friend sent it to me," I told him.

He gestured impatiently. "Well, put it down, kid. Put it down. It's time we got going."

"I don't think I'll use the Strad," I said carelessly. "Think I'll try this one. You know, it seems to have a mighty good tone."

"Seems to have a mighty good tone!" he exploded. "Have you just lost your ever-lovin' mind? You don't use an untried violin in New York, Davie. Not in New York!"

But he went along with the idea in the end. Rudy was a good friend—and a good actor too.

A few days afterwards I came across the beginning of a letter. Scrunched up into a ball, it'd missed the wastebasket and lodged behind one of the desk legs. The handwriting was Rudy's, and it began, "Dear Uncle Albert . . ."



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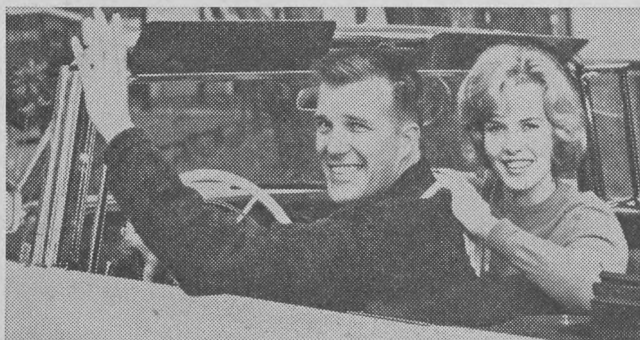
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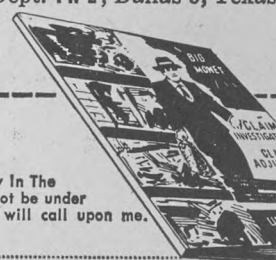
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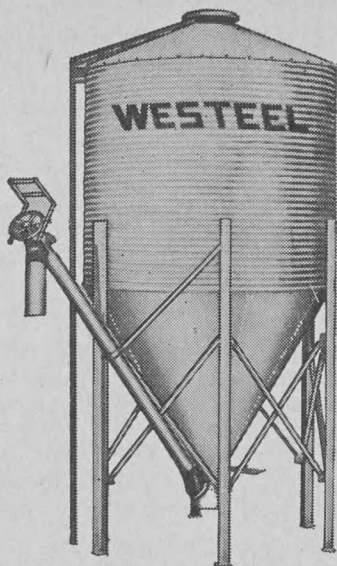
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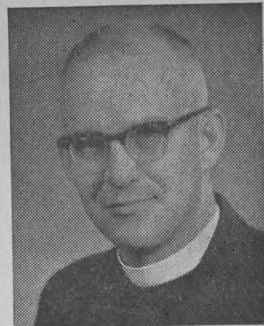
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# Let's Think It Over

by THE VERY REV. M. L. GOODMAN



## Hair Shirt, Anybody?

Do you remember the old-fashioned winter underwear? It was prickly  
stuff, but surely not as irritating as a hair shirt. You wouldn't suppose that  
anyone would wear a hair shirt if he could help it!

Some of our Christian ancestors did. They wore hair shirts on purpose  
as a kind of self-discipline and mortification of the flesh, and they wore them  
secretly. In this we see something of the dimensions of their patience and  
fortitude! After his death, Thomas à Beckett was discovered to have been  
wearing a hair shirt. This discovery greatly impressed his contemporaries as  
an almost sure sign that he was a saint.

You and I might say that life is hard enough. There is no need to invent  
trials and tribulations to make it harder.

The crucial question is how do we accept the hard and unpleasant things  
that life brings? Do we resent them? Do they embitter us? Do they make us  
grumble loud enough for God to hear? Are we even impatient and intolerant  
of little annoyances?

Years ago, a friend of mine said he was changing to another church  
because he didn't like the hymns! Wasn't this a sort of hair shirt that he  
could have worn quietly, patiently—in a small way to the glory of God?— and  
for the good of his own soul?

There are many such instances. The Christian life was never presented  
to us as some kind of everlasting picnic, with always fair weather and every  
circumstance agreeable.

There's a hair shirt somewhere for you. If you put it on, don't tell any-  
body. Keep your discomfort to yourself—except that you may humbly offer  
it to God.

*Suggested Scripture: Romans V, verses 1-5.*

## Instinctive Behavior

Years ago we had a remarkable cat.

She was very big for a female and not the least bit afraid of dogs; but  
once a dog did put her up a tree. He was a large and rather vicious animal  
from next door. All the nearby neighbors came to our pump for water. The  
dog would accompany his owner on this particular errand. One day he took  
the cat by surprise and to save herself she went up the tree.

It was only a short while later that the dog came back into the yard.  
This time the cat saw him coming; but he didn't see her.

She was lying on the woodshed window sill, about four feet above the  
ground. He had to pass directly underneath as he padded beside his owner  
on the way to the pump. You could see her getting ready, and when he was  
right below her, she landed square on his back, all claws flying. Not knowing  
what had hit him, he fled yelping and the cat stayed with him for thirty or  
forty feet. He never came back in the yard again. Thus she had her revenge.

This is all right for a cat.

More is expected of us.

Is it not?

*Suggested Scripture: I Peter II, verses 19-end. St. Matthew V, verses  
38-end.*

## When Ye Pray

Jesus' disciples said to Him—"Lord, teach us to pray." This desire is still  
expressed today. The booklet that goes most quickly from our pamphlet rack  
is one entitled—How to Pray. The serious Christian is properly concerned  
about his prayers.

In this concern we should ask ourselves two questions. The first is—have  
we matured in prayer?—or are our prayers much the same ones we said as  
children? If we are going to talk to God we must put our minds to it and talk  
sensibly. We don't talk "baby talk" to our friends. We can hardly justify using  
it in our conversation with God. The second question is—do we give God an  
opportunity to talk to us?

In our attempt to grow in prayer this simple pattern may help—use the  
letters of the word ACTS. (We are making "acts" of prayer). A—stands for  
adoration. It is logical and proper that the creature first humbly acknowledges  
the glory and wonder of his Creator. C—then he looks at himself and confesses  
his failures. T—he considers God's mercies and gives thanks. Finally he dares  
to ask—the S is for supplication.

*Suggested Scripture: Luke XI, verses 1-4, and Matthew VI, verses 1-15.*

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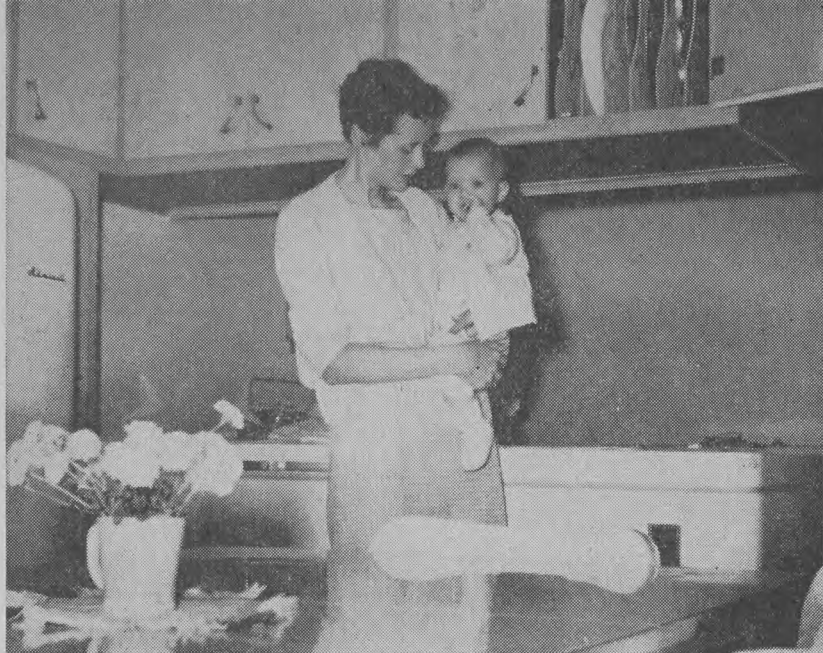
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# Home and Family



[Guide photos

The divided tray storage cupboard permits Shirley McAllister to select trays, plates and platters with one hand—an advantage she appreciates when the other arm holds Karen.

## She Planned Her Kitchen with Care

by GWEN LESLIE

**T**EN-MONTH-OLD Karen McAllister clutched at her mother's skirt for support. Sister Janet, 4, scrambled up on a chair from which she could reach the water faucet. Merrily she mixed water with a scoopful of flour, in imitation of her mother who was assembling the ingredients for a cake.

"It isn't the amount of work I do in a day, it's how I do it!" Shirley McAllister said with a smile.



Janet (r.) joins Karen at play with items from the lazy susan shelves.

A well-planned kitchen permits her to work efficiently despite the distractions the children provide.

When she remodeled her farm kitchen, Shirley drew on her training in home economics at MacDonald Institute, Guelph, Ont. In it, you see an application of many of the suggestions offered by Prof. Harris on page 62.

The McAllister kitchen used to be two rooms, one large and one small. Now it is one room, divided into kitchen and laundry areas by a chest-type freezer and cupboards above it. Shirley did partition off a small washroom in one corner of the laundry area. A cupboard extends the front of this partition and houses the ironing board and iron; coats hang in the open space behind. Both Shirley and husband Ian make good use of the desk built in along the same wall.

Below counter-level cupboards form an "L" on two kitchen walls. Above-counter cupboards form a "U," extending above the freezer.

Shirley planned her cupboard storage for maximum convenience. From top to bottom in a three-drawer storage unit to the left of the stove, she stores table linens, pot lids, and assorted information she has filed for future reference. The first shelf in cupboards above this unit holds cookbooks.

To the right of the stove there is another three-drawer storage unit. The top drawer contains utensils; the middle one pot holders; and the deep bottom drawer is divided for convenient baking pan storage.

Lazy susans make use of hard-to-reach corner space above and below counter level. Here, Shirley points out, child-rearing can wreck adult-planned efficiency. The children have adopted the lower lazy susan as their own, so for the time being it holds their favorite kitchen playthings.

On the lower shelves above counter level, Shirley stores the dishes she uses most often. Things used only occasionally are placed on the higher shelves. A cutlery drawer next to one sink allows easy replacement after washing. Sliding racks below counter level bring pots and pans readily to hand.

Narrow panel cupboards at either side of the double sinks house pull-out rods for dish towels

and hand towels. Shirley eliminates some bending by keeping dishwashing soaps on the first shelf in the upper cupboard to the right of the sinks.

One pair of cupboard doors below the counter opens on drawers of graduated depths which give easy access to kitchen wrap, paper bags and vegetables.

Shirley lined the back of the broom closet with peg board so she could hang whisks, dustpan, etc., at convenient heights.

Above the freezer, on the remaining arm of the U-shaped upper cupboards, Shirley stores canned goods. The section next to this is divided vertically to hold trays, large serving plates and platters upright.

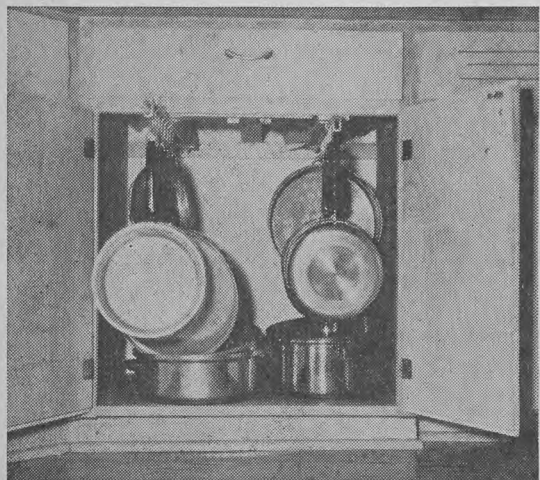
Because she finds the freezer lid a handy place to change the baby, Shirley stores baby powders and other supplies in a shallow cupboard which backs on the tray storage and opens toward the laundry area. Adjoining shelves hold laundry soaps, bluing and bleaches.

**O**UR kitchen wasn't designed for all the baby furniture," Shirley admits ruefully. She has another regret regarding her well-planned kitchen cupboarding. "We used nylon rollers in the big, heavy drawers. They seemed so expensive at the time that we used metal ones for the others. But the drawers jump off the metal ones, and we've often wished we had used all nylon."

Ian McAllister graduated in agriculture 2 years before Shirley obtained her home economics degree. Following graduation he worked in the farm economics branch and the extension branch of the Ontario Department of Agriculture. Shirley worked for a year as a district home economist. But Ian chose to farm, and the year they were married he and Shirley took over his home farm near Zurich in Huron County.

"We like the freedom, and we're happy with the increased responsibility," Shirley told me. "We thoroughly enjoyed extension work, and the many people we met. We did resign ourselves to the fact that when we exchanged our salaried jobs for farming, we'd have less money to spend. What we have goes into the changes we're making on the farm and in the house."

The changes the McAllisters are making share a common basis of sound planning, and are designed to make it easier to do the work which must be done.



A selection of saucepans slides readily to hand on the rods spaced to allow for pan sizes. This storage feature minimizes bending and pan stacking.





(Wahleen photo)

Small people need a lot of help from mother. Because these needs take time and energy, it's important that mother find methods to make housework easier.

# Tips for Tired Mothers

by **ELVA FLETCHER**

Home Editor

**W**HERE is the young mother who, at one time or another, hasn't said to herself "I'm so tired I can hardly lift my weary bones?" One heart specialist says that "compared to housework, most jobs are a cinch." And a medical doctor, addressing a postgraduate medical group, says that most young mothers are tired.

Some of them are tired occasionally, others almost all the time. He points out that often this fatigue is not the result of any organic disease. Rather, he is convinced that there are just too many things for them to do. He calls it the "tired-mother syndrome."

In his opinion, they try to do too much too well. They don't always face large, insolvable problems. However, they are exposed to a myriad of small ones. He suggests that they need to conserve their energies for the most important activities instead of squandering them with worry, indecision and discontent over small tasks. He makes another point: that women, and men too, are born with variable amounts of drive and energy and they need to learn how to live within those amounts.

More recently, Prof. Marjorie Harris, of the Home Management and Family Relationships Department at the University of Saskatchewan's College of Home Economics, offered some suggestions to homemakers to help them lighten their work load in "Home and Family," a publication of the Women's Extension Service. As she sees it, modern household appliances, wonderful as they are, have not taken all the work out of housework.

Small children still play on the floor. They still need to be picked up many times each day. There is no such thing as a mechanical baby-lifter, at least none so satisfactorily designed as mother herself. Meal preparation and clean-up is still largely unmechanized. This means that homemakers use hands, arms, legs and back for long hours each and every day. And where is the homemaker who knows the meaning of a 40-hour week?

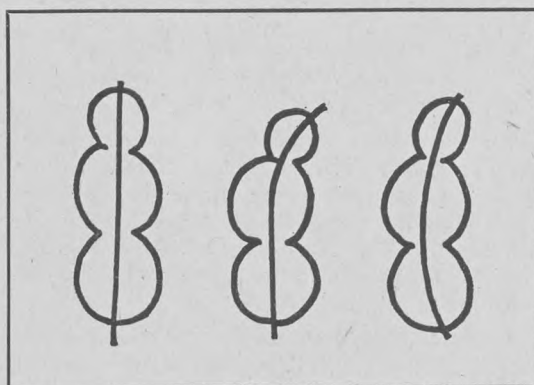
For the homemaker, then, her body is her most important item of household equipment. And that's reason enough to develop skill in using it effectively.

This skill begins with correct posture. Correct

posture is nothing more than the correct distribution of weight as between the three body areas—head, chest and pelvic sections. Added to correct posture is the need for wise use of body energy.

So long as these three body sections are balanced—whether it's at work or play, sitting or standing, walking or climbing stairs—minimum muscular effort holds the body upright. However, when this natural balance is disturbed, muscles must work to maintain it.

Look, for example, at such simple activities as sewing or writing. As you bend your head forward, muscles work to maintain the necessary degree of balance. You can almost feel muscles going to work to hold the three body areas in line. These diagrams illustrate this point:



Try to keep the body sections in line and in balance. For example, when you lift the baby from the floor, use a deep-knee bend, rise, and lift the baby and part of your own weight by straightening your legs. This way, you use leg muscles rather than back muscles. This helps to keep the body sections in line and makes the best use of long leg bones. There is another reason: Leg and thigh muscles are long and strong; they can do a better lifting job than the small thin back muscles.

When you lift anything heavy, lift or carry it as close to the body as you can. Try, too, to eliminate lifting as much as possible. For example, don't lift wet clothes from a basket on the floor up to the clothes line. Put the basket on a cart

and the damp clothes and linens into the basket. Then hang them. Wet wash weighs twice as much as dry wash. When you have it at a convenient level, you conserve energy that you would otherwise use.

**D**R. HARRIS uses another study to make the point that the height of working surfaces is also important to good posture. This study indicates that it takes twice as much energy to raise the arms to a height of 56 inches as it does to reach up 46 inches. It takes even more energy to reach below-counter heights. Reaching, bending, and stooping are common to many household tasks—food preparation, dish washing, storage of utensils and supplies. If sinks, counters, sewing tables and desks are too low, using them puts a strain on your body and you use more energy than is actually necessary.

Isn't this reason enough to check the location of equipment and utensils in kitchen cupboards? Store the ones you use most frequently in those areas least costly in energy. You probably know how tiring it is to lift countless small laundry items for young children to a high clothesline. Why not clotheslines or racks at elbow height for small garments, towels and socks to conserve energy?

All household tasks are less tiring when you have equipment and supplies close at hand.

Perhaps you have already learned that there are some chores that go much easier and faster to music whether it's boogie beat, three-quarter or four-four time.

Studies prove that work performed rhythmically is much less tiring. The reason, Dr. Harris explains, is that working bones are surrounded by double sets of muscles. When you work awkwardly or under tension, both sets of muscles work at once and fatigue comes sooner. She uses the movement of the pendulum to prove her point: As a pendulum swings back and forth, it stops for an instant at the far point of its swing. Muscles work similarly. When they are used rhythmically, each set of muscles rests for an instant.

Why not try a little rhythm when you are washing dishes, polishing silver, running the vacuum cleaner or ironing flat pieces? It's another way to let your body work for you and make your housework easier.



To make your body work for you . . .

- You can take some of the work out of housework by:
- ✓ *Keeping the three body sections in a straight line as much as possible.*
  - ✓ *Using large muscles and bones in preference to small ones.*
  - ✓ *Carrying weights close to the body.*
  - ✓ *Working rhythmically.*



**DO** try to find ways to eliminate lifting. One way is to use a laundry cart. It puts wet wash within reach and so conserves the energy you would use if you chose to stop and lift each individual piece from the floor level.



**DON'T** do it this way. Save your energy and your back by putting your laundry load close at hand. Use the same rule for often-used items.



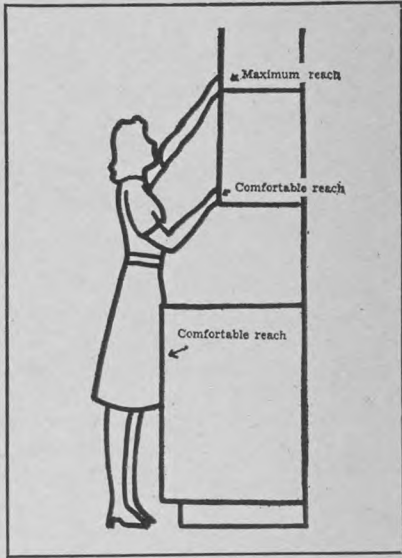
**DO** give your back a break when lifting baby. Bend knees deeply as above. As you rise with him straighten your legs. In this way leg bones and muscles work for you.



**DON'T** lift the baby in this way. By doing so, you tend to put unnecessary strains on the small, thin muscles of your back and this contributes to body fatigue.



This diagram shows what happens to your posture when your working surfaces are not co-ordinated to height and reach. When the body sections are out of line you feel fatigued.



It takes twice as much energy to raise your arms to a height of 56" above the floor compared with a 46" height. To reach below-counter levels you will use even more energy.



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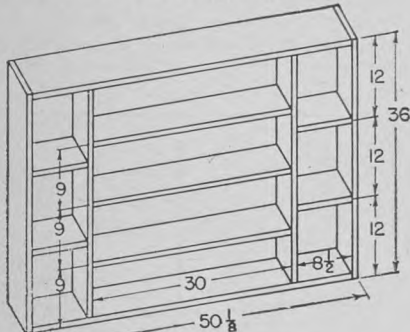


## Toy Shelf

by C. RAYMOND

A WALL shelf will provide storage for the youngsters' model trains. The project is made of 1 by 6-inch lumber. Butt joints are used throughout.

First, make the outer frame as shown. Assemble the frame with glue and 6-penny finishing nails. Next, mark the location of the vertical separators. Before nailing the separators in place, mark the location of the shelves as shown in the diagram.



Cut the center shelves 30 inches long. The end shelves are 8 1/2 inches long. Attach the separators and shelves with glue and 6-penny finishing nails.

Round all sharp edges and sand the project smooth.

To hang the shelf, fasten mending plates or strap iron to the back edge of the sides at both top and bottom. Locate the position of wall studs and attach the wall shelf through the wall to the studding. Use No. 6 1 3/4-inch flathead screws.

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## GIN PILLS

FOR THE KIDNEYS



The Lucas family used mosaic tile for their lazy susan dining-room table. [Guide photo]

## Mosaic Goes Modern

MOSAIC, an ancient art form, has been given a twentieth century look. And today more and more people—adults and children alike—are finding a wide variety of uses for it.

For one example, Marnie and Don McQuoid, of Estlin, Sask., whose story appeared in the December issue of *The Country Guide*, made mosaic-covered coffee tables for their living room. The tables cost a fraction of similar ones that are commercially made. Marnie also gave their bathroom vanity a mosaic top.

One of the most interesting uses I've seen for mosaic is the lazy susan dining-room table made by the seven members of the Lucas family.

The table was a family project. Margaret and Antonie Lucas designed it and arranged for its parts. Each of the Lucas children—12-year-old Anton, 11-year-old Jelmier, Sasja 9, Pieta 7, even 4-year-old Lorenzo—put their own individual designs into the table top.

The Lucases used turquoise and black tiles which contrast pleasingly with the gray cement that binds them together. Mr. Lucas got a blacksmith to make the circular iron rim that forms the table's outside edge. Table legs are ordinary iron pipe; so is the stationary pole around which the plywood-backed table top moves.

There are many uses for mosaic. You can use it for table and counter tops, backsplashes for stoves and sinks, wall plaques, serving trays and ash trays. It can be used with equal success for whole walls or inserts in wall.

The basic ingredients are easy to find and relatively inexpensive. For example, tile can be bought by the sheet. Most colors cost about \$3 a sheet. Individual tiles will cost about 3 cents each. There are special adhesives for use with the tile but many crafters prefer plain gray cement. The Lucases used cement and mixed plaster of paris with it.

Today many craft centers offer a variety of mosaic kits, complete with instructions. The larger kits usually include plywood backing, several sheets of tiles and the necessary ad-

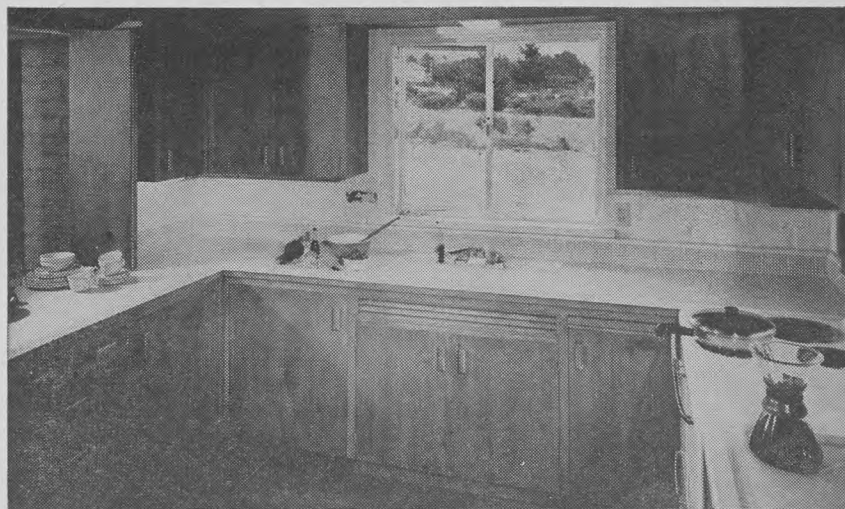
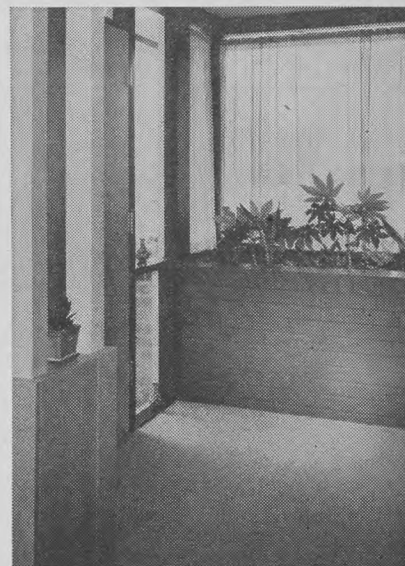
hesive. Coffee table kits may also include the table legs. The design is drawn on the wood; directions for color are included in the kit.

Once you have mastered the basic techniques you will probably find yourself developing your own designs in the tradition of the mosaic artists of old just as the Lucas family did.—E.F.

## Decorating Hints

by L. P. BELL

Do you want to give your hall a new and different look? If you have sufficient wall space, try a bright, gay picture. Some halls lend themselves to built-in or portable planters made of brick, wood or other suitable material. One such planter is pictured here. Family members might build your planter or you might buy one ready to be installed. Filled with attractive greenery, it will give your hall a point of interest.



We can often get excellent ideas in decorating from seeing what other people do in their homes. Take this kitchen, for example. Instead of kitchen curtains that catch dust, steam and kitchen odors, the homemaker framed her view by painting the window frame the same bright yellow as the tile. She also installed fold-back doors between the kitchen and dining room pass through. Closed, no one can see into the kitchen; open, they simplify table settings, food service and clearing-up time.



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Simple activities will make the hours seem shorter for sick-in-bed children. Here are some ideas to . . .

## Keep a Sick Child Happy

by JEAN GILCHRIST

**“W**HAT can I do?” Every child who must stay in bed finds that time seems to pass very slowly, and unless he is so ill that play is impossible or forbidden, he needs many activities to keep him from becoming bored. These activities should be interesting without being difficult; materials used must be light and easy to handle. Most children will spend some time with books and crayons, but they often want something different.

Here are some ideas for sick-in-beds. Most of these activities need only to be introduced to the child. Then he will carry on independently, leaving mother free to do her housework or tend the baby.

1. Use construction paper to teach them to weave. Cut slits not quite to the edge of a piece of paper and have the child weave different colored strips through the slits. Weaving with strips of cloth or ribbon can be done easily by pinning or tying the strips in one direction on a picture frame (without glass or backing) and then weaving the cross-strips in.

2. Use jumbo yarn or heavy cord to make braids. Knot the ends and pin the knot to the sheet. Children are fascinated when they learn to braid while they use their imaginations to turn the braid into a belt, a lasso, or “look at my pig-tails!” I find their chief interest is in the actual braiding process.

3. Some children enjoy sewing on buttons, mending torn pages in books, sorting and folding socks from the laundry, or doing other simple chores.

4. A few pieces of paper stapled together to make a little book often put ideas to work in the child's mind. He may write a story, make lists. I don't have to make any more

suggestions; he'll know what he wants to do with it.

5. Almost every home has a box or bag full of buttons that were cut off discarded clothes but were “too good to throw away.” Let the sick child play with them but give him a tray or large shallow box so he won't lose the buttons among the bedclothes.

6. If the child needs a quiet period but can't go to sleep, let him listen to quiet records or turn on a favorite program. However, indiscriminate use of radio or TV can be more disturbing than restful.

7. Every child who must stay in bed should have a chance to read or hear Robert Louis Stevenson's “The Land of Counterpane,” from *A Child's Garden of Verses*. He'll probably want to hear it so often that he will eventually memorize it.

8. Bring out the collections: the stamp album, the coin cards, the snapshots and photographs. If the child is to stay in bed for more than a few days, he might start a collection of his own, even something as simple as a scrapbook of animal pictures.

9. Is there something your child wants to learn? It may be something as important as telling time or as insignificant as twiddling his thumbs. One little boy I know puffed and wheezed for a couple of sick-days until he learned to whistle!

10. A favorite in our home is the Surprise Bag. I use a plain cotton bag about 6 by 9 inches, but a paper bag or old purse does just as well. In it I put half a dozen odds and ends—jewelry, bus tickets, milk tokens or tickets, a small padlock and key, a ribbon, a few pennies, a wallet calendar—anything that might appeal to a young imagination. Many items will get only passing interest, but some one thing in the Surprise Bag will kindle a spark, and soon the child has become a milkman, a storekeeper or some other person.

11. Unless the doctor decrees otherwise, give the child frequent small snacks. Make them attractive and easy to handle. A plastic picnic plate with recessed spaces for food is excellent for snacks in bed. If you use a plain plate, put a bit of dampened paper towel under the cup or glass. Then it won't slip around.

When you are choosing sick-bed activities for your child, remember that the most important thing is to find something different, something he doesn't usually do. If he is happily occupied, time will pass more quickly for him and for you, and a happy patient, young or old, often recovers more quickly than a bored, listless one.

V

## Fashion Forecast

# Blazers Make

**T**HERE is a certain quality of excitement to each spring . . . and there's an alluring, indefinable something in the spell cast by some fashion seasons. We think the distinctive stylings offered this spring are exciting themselves, and express the excitement of the season. They are youthful, as the year is young, and they combine the relaxed easiness of recent seasons with a trimly tailored smartness that is distinctly fashionable for 1964. The blazer blooms afresh this spring: double-breasted, brass-buttoned, four times pocketed, and with its deep V-neck framed by a notched collar.

Vibrant bold colors burst anew upon the scene; wild blue displaces the traditional navy. You may find these brilliant brights' pastel counterparts more becoming. The pastels are clear, frostily fragile and feminine. In fabrics, the texture ranges from loose, rough-textured basket weaves to filmy wisps of chiffon.



## THE JACKET

No. 3006. This up-to-the-minute jacket dress features a semi-fit dress with extended shoulders, no sleeves. Top-stitching trims front panel seams. The double-breasted jacket front is semi-fitted; back is boxy. Misses' sizes 10, 12, 14, 16 and 18; 70¢.





# fashion News

## SILHOUETTE

The blazer jacket sets a dashing pace for day-time wear. Wear it in solid colors, stripes and florals; in smooth and textured fabrics. The same attention to detail shown in the blazer styling is paid to the many new versions of the easy-fitting shift dress. Back belts dip deftly between side seams, yet give a hint of fit to the dress front. Some shifts feature front-panel pockets at hip-bone level. Buttons, patch of flap pockets, top-stitching, welt seaming, ruffles and tucking contribute to the endless variety in shift-type dresses. For spring, add a jacket for a new suit-look; jackets are a little longer this spring. Short coats are new too. Precisely tailored, they top dresses and skirts alike for fetching costume effect.

Necklines are making news this spring. Some have dipped so daringly as to make headlines! More wearable for most of us are the softly draped cowl necks, fabric neck scarves, tie necklines, and the new and different collars. One such collar, long and pointed, recalls Lord Byron's influence and is named for him. Sleeves are more interesting this spring too: Many end in shirt cuffs; others drop from extended shoulder seaming. There are long and elbow-length sleeves with puff and bell shaping. Embroidered and lace sleeves offer the most feminine touch of all.

Nudging the traditional navy aside, wild blue is an exciting and original new spring hue. Somewhat brighter than royal blue, the new shade is most intriguing in prints which mix it with white or with black.

## COLORS

Combinations of white and black proved so very popular in the past year, that there's even greater variety available this spring. Watch for black and white prints, plaids, dots, stripes, florals and abstract designs.

The blazing brights, as the bold and brilliant new colors are described, include a sun-hot glowing gold, poppy orange, and a rich range of lacquer reds. Promised combinations of lacquer red with marigold yellow or clear green, intense orange with a brilliant mid-blue, threaten to be blinding bright!

There's a hint of violet in some tints of a peppy pink which steps from clear brightness to deep wild berry shades. You might prefer what's described as tantalizing turquoise: Tantalizing or not, turquoise is more universally flattering than blued pink. Turquoise tones range from clear and bright to darker teal shades.

For days and doings when you'd prefer to dress in colors neither blazing nor bright, there's a wide choice in fresh and pale pastels. Look for the mother-of-pearl blues, soft mauves, pale yellows, and tones of coral-salmon among these creamy tints. And if you wish even less color, try the gray-cast neutrals: antique ivory, driftwood beige, alabaster, bone, straw.

## FABRICS

Linen, and the look of linen, dominate the fabric picture. A handwoven effect, basketweaves and network knits emphasize the natural linen texture. Re-embroidered linens are particularly lovely; color-co-ordinated prints and plains are ideally suited to 2- and 3-piece costume use.

Surface texture generally is a little flatter this spring. The blazer has focused attention on flannel, and there is a trend toward smoother, flat-textured fabrics for suits and coats. Tweeds offer infinite variety in color choice—some combine



3038





## THE BLAZER

**Pattern includes:**

1. The Blazer
2. The Blazer Suit
3. The Blazer at Sea
4. The Blazer at Play
5. The Blazer as a Topper
6. The Blazer Coordinates

Misses' Sizes  
10-18  
85¢









**No. 3038.** Long-time leader in the fashion world, Coco Chanel has revived the dashing blazer. Here the double-breasted blazer with button-trimmed patch pockets is offered with a back-buttoned shell blouse with Johnny collar, darted straight skirt, long length and Bermuda pants. Misses' 10, 12, 14, 16, 18; 85¢.

dazzling bright colors, others mix brights with pastels, colors with neutrals.

A wider selection of stretch fabrics is available in cotton, wool and nylon blends. These fabrics are intended not only for garments designed for, and dependent upon, stretchability. They impart shape retention and resistance to creasing to any garment for which they are used.

The newest knits are machined from highly mercerized cotton. These are silky to the touch and wonderfully drapable. Gold and silver threads give some jacquard double knits an iridescent frost-like sparkle.

A record crop of flowers blooms on summer cottons. Piques, raised cottons and tucked fabrics provide surface interest for simple styles. Pale pastels, dark plaids and the gayest of stripes and checks paint a new face on seersucker for spring and summer wear.

Crêpe, chiffon and lace are suggested for an ultra-feminine look in dress wear. v

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## Lunch-Box Trade

**T**HE carrots are always crisper in the other fellow's lunch box! From what we've heard, some brisk noon-hour trading is done among the youngsters who carry their lunch to school. Whether it extends to cookies may well depend on the number you pack. When they are as good as the ones made from the family-size recipes below, your trader will drive a hard bargain.

### Raisin Face Cookies

- |                                   |                                       |
|-----------------------------------|---------------------------------------|
| 1 c. shortening                   | 2 tsp. cream of tartar                |
| 1 c. sugar                        | 1/2 tsp. salt, if shortening unsalted |
| 2 eggs, beaten                    | 1 tsp. vanilla                        |
| 1 tsp. baking soda                | 1/2 c. sifted all-purpose flour       |
| 2 1/2 c. sifted all-purpose flour | 1/2 c. raisins                        |

Preheat oven to moderate temperature of 375°F. Grease cookie sheet.

Cream shortening and sugar. Add beaten eggs and vanilla and beat well. Sift baking soda, cream of tartar and salt, if you have used unsalted shortening, with the measured sifted flour. Add to creamed mixture.

Roll dough out to 1/4" thickness. Cut with a round cookie cutter 3" in diameter and place rounds on cookie sheet. Decorate with 3 raisins each for eyes and nose. Bake in preheated oven at 375°F. for 8 to 10 minutes, or until done.

### Oat and Raisin Cookies

- |                    |                               |
|--------------------|-------------------------------|
| 1/2 c. butter      | 1 tsp. salt                   |
| 1/2 c. shortening  | 2 c. sifted all-purpose flour |
| 2 c. brown sugar   | 2 c. oatmeal                  |
| 2 eggs, beaten     | 1 c. raisins                  |
| 1 tsp. vanilla     | 1/2 c. walnuts, chopped       |
| 1 tsp. baking soda |                               |

Preheat the oven to a moderate temperature of 350°F. Grease a cookie sheet lightly.

Sift the measured sifted flour again with the salt and baking soda. Put the oatmeal and raisins through the food chopper, using a medium blade.

Cream the butter and shortening thoroughly; cream in brown sugar. Add beaten eggs and vanilla and beat well. Stir in the flour mixture, then the ground oatmeal and raisins. Add nuts.

Drop dough by the teaspoonful on the lightly greased cookie sheet and flatten with a floured table fork. Bake in preheated oven at 350°F. for 8 to 10 minutes, or until done. Yields about 8 dozen cookies.

### Fruit Drop Cookies

- |                               |                          |
|-------------------------------|--------------------------|
| 1 c. shortening               | 1 tsp. cloves            |
| 1 1/2 c. brown sugar          | 1 tsp. allspice          |
| 3 eggs, beaten                | 1/2 c. hot water         |
| 3 c. sifted all-purpose flour | 1/2 c. sour milk         |
| 1/2 tsp. baking powder        | 1/2 lb. dates, chopped   |
| 1 tsp. baking soda            | 1/2 lb. walnuts, chopped |
| 1/2 tsp. salt                 | 1 lb. seeded raisins     |
| 1 tsp. cinnamon               |                          |

Preheat oven to moderate temperature of 350°F. Grease cookie sheet.

Cream shortening and sugar. Add beaten eggs and beat well. Sift the measured flour with the baking powder, baking soda, salt and spices and add dry ingredients alternately with hot water and sour milk liquids to the creamed mixture. Stir in prepared fruit and nuts.

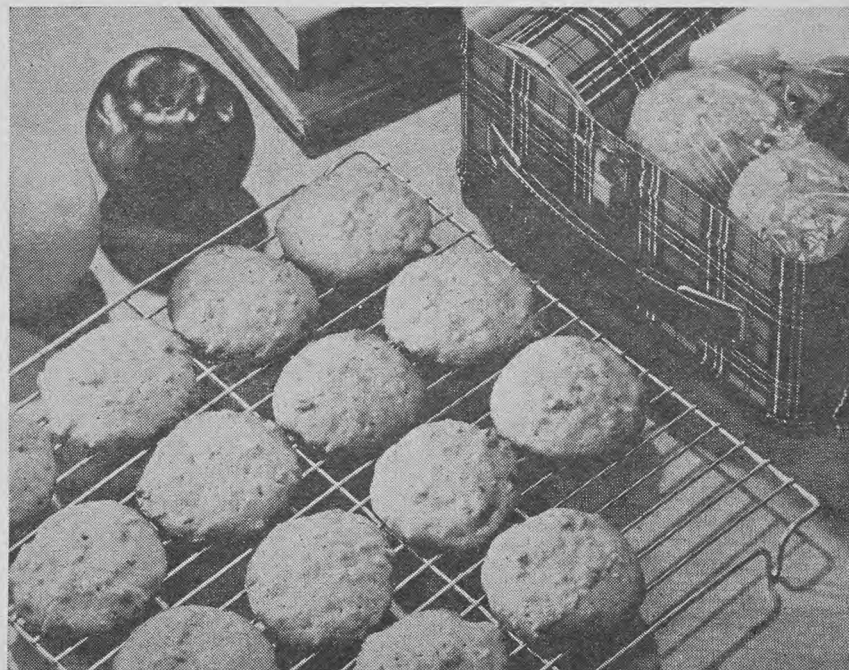
Drop the dough by the teaspoonful on lightly greased cookie sheet and bake in preheated oven at 350°F. for about 20 minutes.

### Honey Drop Cookies

- |                              |                        |
|------------------------------|------------------------|
| 1 3/4 c. sifted pastry flour | 1/2 c. honey           |
| 1 tsp. baking powder         | 1/4 c. sugar           |
| 1/2 tsp. baking soda         | 1 tsp. vanilla         |
| 1/2 tsp. salt                | 2 eggs, well beaten    |
| 1 tsp. cinnamon              | 1/2 c. sour cream      |
| 1/2 tsp. cloves              | 1/2 c. chopped walnuts |
| 1/4 tsp. nutmeg              | 1 c. cut dates         |
| 1/3 c. soft butter           | 1 c. crisp rice cereal |

Preheat oven to a moderate temperature of 350°F. Grease cookie sheet lightly.

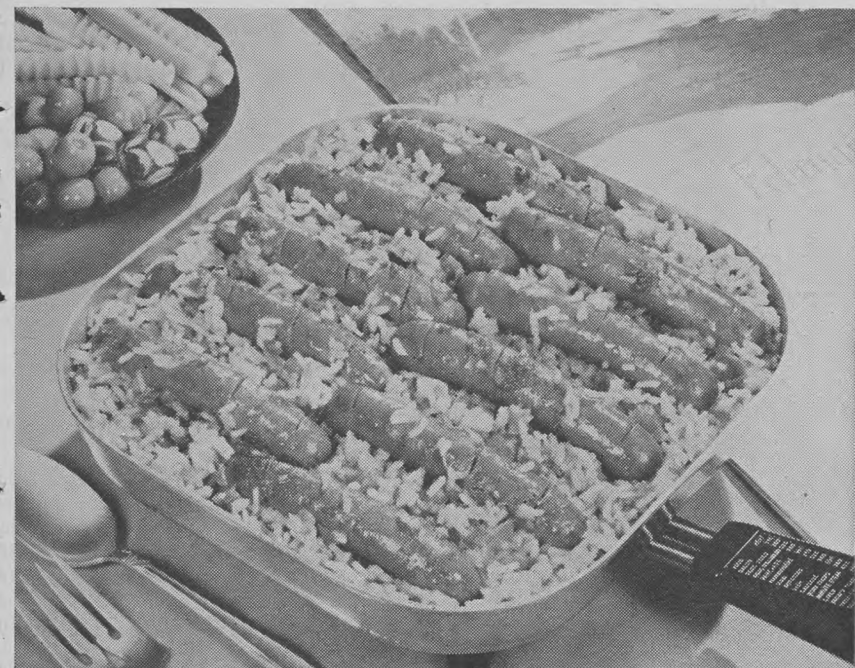
Sift the measured flour with the baking powder, baking soda, salt and spices. Blend butter, honey, sugar, and vanilla together until fluffy. Add beaten eggs and sour cream; mix well. Stir in sifted dry ingredients together with the chopped nuts, dates and rice cereal. Drop by level tablespoonfuls on lightly greased cookie sheet and bake in preheated oven at 350°F. for about 15 minutes. Yields about 4 dozen cookies.



Those drop cookies are popular with mom as well as with the lunch-box crowd.



# "Frankly" Budget Pleasing



[Martha Logan photo]

This chili-spiced Franks and Rice supper dish cooks quickly in a skillet.

THE frankfurter places high among youngsters' favorite foods. One family learned just how high while eating in a restaurant recently.

"What's the book for?" greeted the menus' arrival.

"You read what's listed there and then you choose what you would like for dinner," was the parental reply, and this was adequate until a thorough reading revealed no hot dogs on the menu listing.

The passing of several weeks has done little to dull a 4-year-old's disappointment. Still, when restaurants are mentioned, he cautions "You can't get hot dogs there!"

The supper suggestions below are "frankly" designed to please the family and ease the budget.

## Chili Spiced Franks and Rice

- |                    |                   |
|--------------------|-------------------|
| 1 lb. frankfurters | 1 T. sugar        |
| 1/4 c. butter      | 28-oz. can        |
| 3/4 c. chopped     | tomatoes          |
| onion              | 1 1/2 c. uncooked |
| 3/4 c. chopped     | rice              |
| green pepper       | 1 bay leaf        |
| 1 clove garlic,    | 1/2 tsp. cloves   |
| chopped            | 1/2 tsp. pepper   |
| (optional)         | 1/2 c. water      |
| 2 tsp. salt        | Chili sauce       |

Melt butter in frying pan. Add onion, green pepper, and garlic. Heat about 5 minutes until vegetables are soft. Mix in salt, sugar, tomatoes, rice, bay leaf, cloves and pepper. Cover and simmer for 30 to 35 minutes. Add a small amount of water during cooking time if rice appears to be sticking to the frying pan. Score the franks with several diagonal slashes. Arrange on top of rice and tomato mixture and brush with chili sauce. Cover and heat for about 5 minutes, or until frankfurters are hot. Serve immediately. Yields about 5 servings.

## Frankfurter Rarebit

- |                   |                    |
|-------------------|--------------------|
| 10-oz. can cream  | 1/4 lb. process    |
| of mushroom       | cheese,            |
| soup              | shredded (1 c.)    |
| 1/2 c. milk       | 1 lb. frankfurters |
| 1/2 tsp. prepared | 6 slices toast     |
| mustard           | 6 slices bacon     |

Heat soup and milk, stirring until smooth. Stir in cheese and mustard, and

continue stirring until cheese is melted. Cut frankfurters into 1/4" slices and heat in sauce. Crisp-cook bacon slices. Serve frankfurter-sauce mixture on toast slices and top each serving with a crisp slice of bacon. Yields 6 servings.

## Frankfurter Spoon Bread

- |                    |                      |
|--------------------|----------------------|
| 1 1/2 c. milk      | 20-oz. can cream-    |
| 3/4 c. yellow      | style corn           |
| cornmeal           | 1/3 c. tomato        |
| 1/2 c. fine dry    | catsup               |
| bread crumbs       | 6 to 8 frankfurters, |
| 3/4 tsp. seasoning | thinly sliced        |
| salt               | 3 eggs, separated    |
| 1 tsp. salt        | 1 1/2 tsp. baking    |
| 1/4 c. finely      | powder               |
| minced onion       |                      |

Preheat oven to a moderate temperature of 350°F. Grease a shallow 8-cup casserole or baking dish.

Scald milk in a large saucepan. Combine cornmeal, crumbs, seasoning salt and onion. (If desired, you may sub-

stitute 1 tablespoon instant minced onion for the 1/4 cup minced fresh onion.) Stir cornmeal mixture into the hot milk, and continue stirring over low heat until mixture thickens. Cook about 5 minutes longer. Cool slightly. Stir in corn, catsup and sliced frankfurters. Beat egg yolks until light; stir into cornmeal mixture.

Beat egg whites until very foamy. Add baking powder, half a teaspoon at a time, and continue beating until stiff. Fold into cornmeal mixture and pour into prepared baking dish. Bake 1 to 1 1/4 hours in preheated oven at 350°F., or until bread is set in center. Serve hot with relishes. Yields 6 to 8 servings.

## Franks and Potatoes Au Gratin

- |                      |                     |
|----------------------|---------------------|
| 1/2 lb. frankfurters | 1/2 tsp. Worcester- |
| 2 T. butter          | shire sauce         |
| 2 T. flour           | 1/4 tsp. curry      |
| 2 c. milk            | powder              |
| 1/2 c. shredded      | 3 c. cooked sliced  |
| sharp cheddar        | potatoes (about     |
| cheese               | 3 large potatoes)   |
| 1/2 tsp. salt        |                     |

Preheat oven to moderate temperature of 350°F. Grease a 4-cup casserole.

Melt butter in a saucepan. Remove from heat and slowly add flour, stirring constantly. Slowly add 1/2 cup of milk to the flour and butter mixture. Stir well after each addition, and stir until mixture is smooth. Add remaining milk. Return to heat and stir constantly until mixture thickens and boils. Blend in cheese, Worcestershire sauce, salt and curry powder.

Cut frankfurters into 1" pieces. Combine half the pieces and half the potatoes in a greased 4-cup casserole. Pour half the cheese sauce over this mixture. Add remaining frankfurter pieces and potatoes. Top with remaining sauce. Cover and bake in preheated oven at 350°F. for 20 to 25 minutes. Yields about 4 servings. ✓

## Homemakers' Hints

Bacon will drain nicely if you arrange the strips over a saucer inverted on a plate.

To applique motifs with a zig-zag attachment, trace the design on the motif fabric. Place the tracing where you want it to go, then zig-zag stitch over the pencil marks. Snip the excess fabric carefully from around the applique. It's easier and neater than cutting the design first and then trying to follow the edge. —Rocanville, Sask.

Use a plastic windshield scraper to clean the bake board easily.

To cut sweet corn quickly and safely from the cob, drive a 3" nail through a cutting board. Push the cob down on the nail, then cut corn kernels off it. —Mrs. M. Hagg, Majorville, Alta.

An extra curtain rod makes a good shoe rack. Fasten it to the inside of a closet door and hang shoes on it by the heels. —Mrs. John Sikora, South River, Ont.

If your nylon or orlon sweater has a knotty appearance here is a remedy. Lay the sweater on a flat surface and shave it smooth with an electric or safety razor. —Mrs. Bud MacDonald, New Glasgow, N.S.

To cut your own glass for windows or pictures, fill a pan with enough water to completely cover the sheet of glass. Cut glass to desired shape and size using a pair of scissors. —Ont., Canada.

Flowers cut from print fabrics make good appliques for aprons. After cutting them out, I rub the back with a little egg white and press in place with a warm iron. Then I button-hole stitch around them by hand or stitch with the machine. —Mrs. H. E. Tripp, Kellier, Sask.

Protect a delicate hat by placing it in a plastic bag. Blow air into the bag and fasten it with a rubber band. —Miss A. Ellis, Litchfield, N.S.



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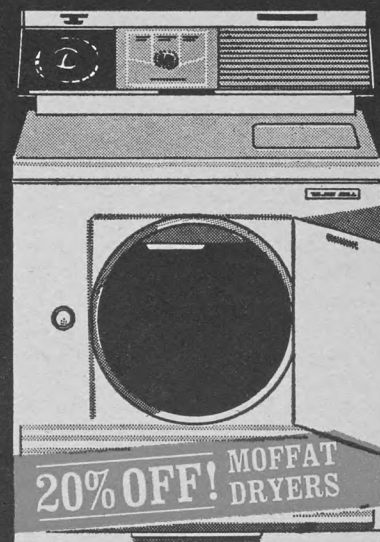
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## HANDICRAFTS

### Needlepoint

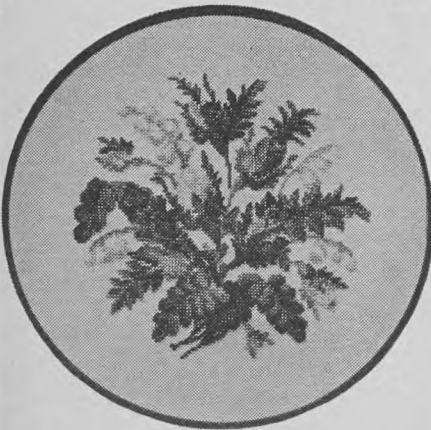
In most needlepoint kits distributed by Jean McIntosh, the pictures are worked from a graph chart. This month she offers a new kit, No. 3905, shown at left. It features a full-blown pink rose painted on 8" by 12" black canvas and is worked in 6-strand cotton. Price of this kit is \$3.50.



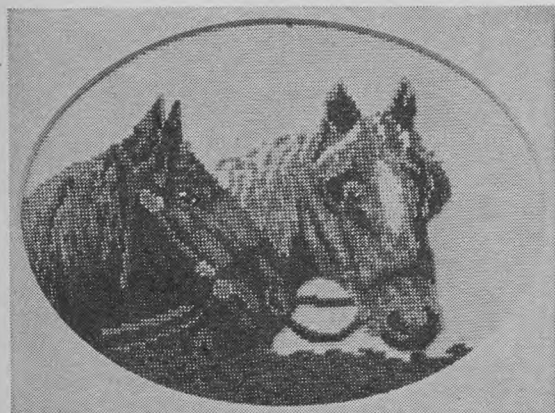
**M-129. The Knitting Lady.** Background is not included for this picture worked from graph chart. Two-thread picture measures 2½" by 4"; 3-thread measures 3¼" by 5". Petit point kits cost \$2.50 each. Wool picture measures 7" by 11"; kit price \$4.50. Chart alone 50¢.



**M-184.** This delicate floral features rosebuds and lily of the valley. Picture is 3" sq. in 2-thread; 4" sq. in 3-thread; \$2.50 per kit. Wool picture is 9" sq.; kit costs \$3.50. Chart ordered alone costs 35¢. No background included.

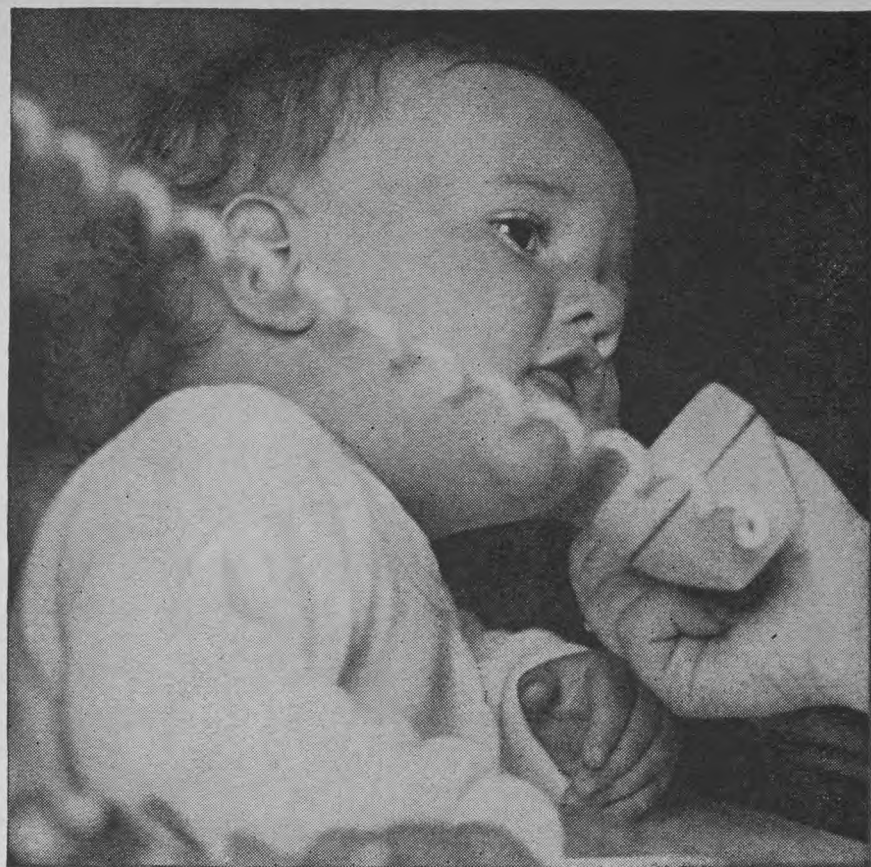


**M-188.** Lights twinkle in the windows of the house in this snowy winter scene. Two-thread picture measures 2½" by 4"; 3-thread, 3½" by 5". Petit point kits cost \$2 each. Wool picture measures 8" by 10½"; \$3.50. Chart may be ordered alone, 50¢.



**M-108.** The heads of 2 horses are stitched in shades of beige and light brown. Two-thread picture measures 4" by 5"; 3-thread, 5" by 6". Petit point kits cost \$2.50 each. Wool picture measures 10½" by 13½"; \$4.00. Chart only, 50¢.

For handicraft patterns pictured above please address your order to Country Guide Needlework Dept., 1760 Ellice Ave., Winnipeg 21, Man.



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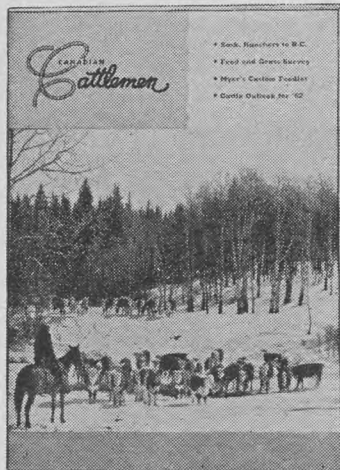
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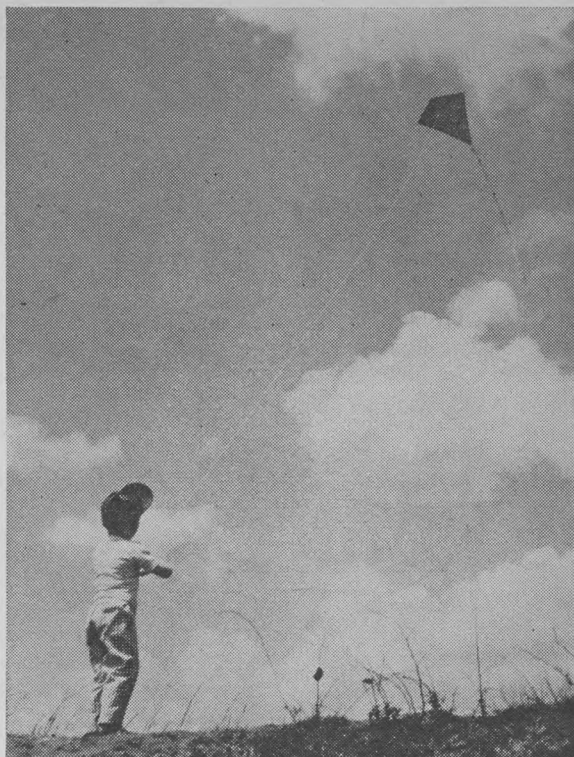
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Imaginative verse captures the flavor  
of country living in this  
collection of rural rhymes

# Flights of Fancy



[Luoma photo]

## I Meant to Do My Work Today

I meant to do my work today  
But a wee bird hopped on my sill to  
say  
The crocus were blooming on hills  
away,  
And I went to see.

I meant to do my work today  
But a voice from the yard called me  
away  
To watch the calves as they frolicked  
in play,  
And I went to look.

I meant to do my work today  
But a little boy called on me to say  
That he'd like to ride on a pony gay,  
And I went to watch.

I meant to do my work today  
But the ponies got in the neighbor's  
hay  
And we had to rush to turn them  
away,  
So I went to help.

I meant to do my work today  
But a mother cat brought me her  
kitten gray  
That ran and played in a happy way,  
And I had to watch.

I meant to do my work today  
But the skies were sullen and dead  
and gray  
And they poured out rain in a hor-  
rible way,  
... So I read.

I meant to do my work today  
I got up happy and fresh and gay  
And the sun shone in a beautiful  
way,  
... So I did.

—MARGARET ELLIOTT

## Spring's Aroma

Aromas from an oven  
When baking fruity pies,  
Or scents of curly wood smoke  
That from our chimneys rise,  
And clover fragrance calling  
To bees and butterflies ...  
All compare in mildness  
To that when brown earth cries  
And Spring with unseen magic  
Perfumes her teary eyes.

—EVA N. EHRLMAN

## Ice-Breaker

It isn't spring  
That melts the might  
Of winter. It's  
A small boy's kite.

—DOROTHY R. MCWOOD

## Those Saving Ways

Every year when springtime comes  
around  
I tear our house apart;  
The piles of junk I haul from it  
Would really touch your heart.  
The newspapers, boxes, broken toys  
And cans of dried-up paint;  
Shoes, magazines and worn-out  
clothes

I lug with grim complaint.  
Cards, letters, rags, old window  
shades  
And cartons from the store;  
I'm sure our bonfire could be seen  
For twenty miles or more.  
With aching back I loudly moan  
"This saving is insane"—  
Then start right in without delay  
To save things up again.

—BEATRICE TELFER

## Tasks

To him, it seemed no more  
Than just another chore,  
Being hardly conscious of  
Performing it with love,  
Or of the child, nearby,  
Watching with eager eye,  
Yet it was then his son  
Learned pride in a task well done.

Busy as mothers are,  
The woman saw no farm,  
Mysterious purpose hid  
In the simple things she did,  
Yet her gentle ministry  
Became the legacy  
Which memory imparts  
To other hands and hearts.

—R. H. GRENVILLE

## When a Mother Bakes

How good it is, when after school  
I slowly move my feet  
Toward the place that I call home  
And something good to eat.  
Before I open up the door  
I know that Mom is there,

She'll be busy at the stove  
And have flour in her hair.

Then comes that heavenly odor  
Of bread and rolls and cakes,  
Nothing can ever smell as good  
As a kitchen when a mother bakes.

—SVEA OSTROM

## To One Going Away

What shall I bring you  
When I come again?  
Bring, O, my love,  
The things you take away;  
The freshness of long-awaited  
Summer rain;  
The promise of the dawn  
When day  
First turns the edge  
Of morning's sky.  
Bring too, your laugh  
To hush this tear.  
Bring but yourself, beloved,  
And I  
Receive a gift  
That you are here.

—JULIA COLLINS ARDAYNE

## Pioneer Cemetery

Like the remainder of a regiment  
After battle, these headstones droop,  
haggard  
And weed-shrouded, in forgotten  
graveyard  
Where coyotes prowl and prairie  
chicken tent.  
For who is left to care who here lies  
pent?  
Who? Since those whose tears once  
blessed this grave-scarred  
Nook of earth have themselves voy-  
aged deathward.  
Prairie corner, sad with abandon-  
ment!  
Oh, rushing traveler, pause gently  
here,  
Vouchsafe a thought to unremem-  
bered bones,  
That once belonged to some stalwart  
pioneer,  
Whose sacrifice of toil, his breath,  
his groans,  
Built the rich fields and cities of our  
age,  
Pause, and do this lonely graveyard  
homage.

—ARTHUR STILLWELL

# The Countrywoman

## Family Reading

IT seems to us that wholesome, well-written books are as necessary to our mental growth as vitamins are to our physical well-being. Many of us were guided into good reading by our parents and teachers. For myself my reading ran the gamut — from animal stories and fairy tales, on to adventure and biography, history and mystery.

Somehow books bring adventure and excitement into our lives. Many of them offer unending inspiration. And most of us turn to books when we want to learn more about the world and times in which we live.

Nowadays, however, it isn't always easy to find books that are entertaining or informative and, at the same time, suitable for family enjoyment. Too often they are full of violence and of doubtful moral value. Obviously they are not at all suited to the family library. Certainly they can't be classed as "family" books.

What is a "family" book? We choose to define it as a book for every member of the family to read, one that is not full of the indecent language and sordidness so often found in today's books, one that's fun to read aloud. It's decent without being dull. This need for family books is the reason for the Country Guide Family Bookshelf.

The Family Bookshelf is a book club, but it is a book club with a difference. Selections are especially designed to delight readers of all ages. They are books by outstanding authors; they entertain and inform at the same time. And they're wholesome, morally sound and of real literary merit.

A wonderful world of well-written, fascinating works await you and your family as members of the Country Guide Family Bookshelf. They're carefully selected to give you a wide variety of enjoyable reading. For example, past selections have included such books as Catherine Marshall's "Beyond Our Selves," who wrote the famous "A Man Called Peter"; Thomas B. Costain's "The Chord of Steel," in which he told the remarkable story of Alexander Graham Bell; and Edward Way Teale's unforgettable adventure through the wonders of the outdoors which he called "Journey into Summer."—E.F.



"We had to eat in town the three days the power lines were down."



# COUNTRY GUIDE

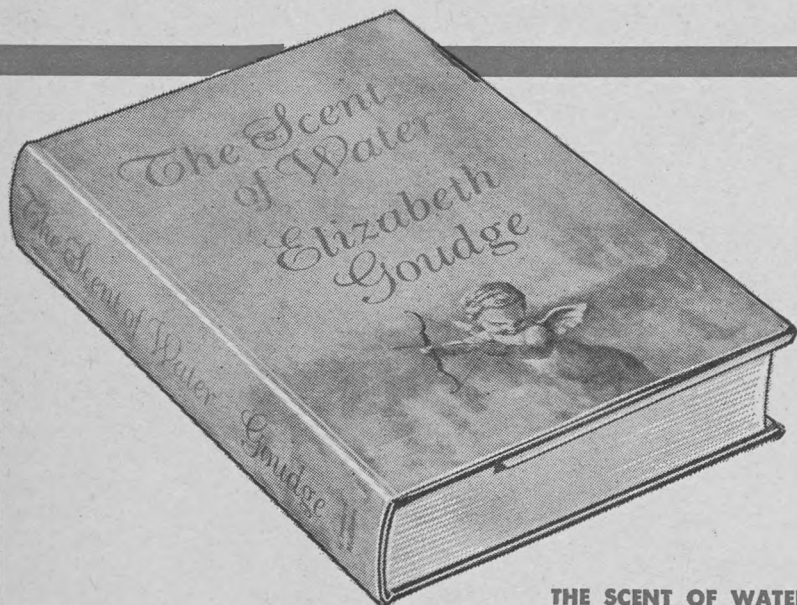
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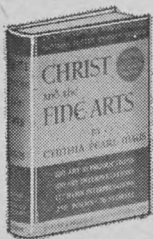
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## Puzzles for You

by JEAN GILCHRIST

### Sammy's Snapshots

SAMMY did many interesting things and visited many unusual places on his trip across Canada. Now he's trying to sort out his snapshots according to the provinces in which they were taken. Can you help him by telling in which province each of these snapshots was taken?

1. The Corner Brook Mill, largest pulp and paper mill in the world, producing over a hundred tons of paper daily.

2. Members of the R.C.M.P. at their Western Canadian training headquarters.

3. A street on which most of the cars have license plates with pictures of buffalo.

4. Several men climbing Mount Robson.

5. Apple orchards in bloom in the Annapolis Valley.

6. A car driving onto the world's largest international suspension bridge, stretching over a mile from Windsor to Detroit.

7. Another bridge, this one only about a quarter of a mile long, but believed to be the longest covered bridge in the world.

8. A lady admiring Lady's-Slippers in the province where they are the floral emblem.

9. A car driving through a gate into the city which claims to be North America's only walled city.

10. A lovely view in Waterton Lakes National Park, which joins Montana's Glacier National Park to form the International Peace Park.

### Answers

1. Newfoundland; 2. Saskatchewan; 3. Manitoba; 4. British Columbia; 5. Nova Scotia; 6. Ontario; 7. New Brunswick; 8. Prince Edward Island; 9. Quebec; 10. Alberta.

### Magic Recipes

Follow the clues in these magic recipes and you'll turn mud and rock into two kinds of food. Each new word you write must have just one letter different from the word before it.

#### M U D

--- unopened flower  
--- very naughty  
--- used to have  
--- a kind of meat

#### R O C K

---- something to hang clothes on  
---- contest of speed  
---- tool for gathering grass  
---- a good dessert

### Answers

Mud, bud, bad, had, ham.  
Rock, rack, race, rake, cake.

### A Picture to Color



## The Day the Cuckoo Lost Her Voice

by CLARE CASWELL

*Miss Clementine Cuckoo lived inside a clock  
In a room, in a house by the side of a dock,  
Close to some sea gulls who lived on a rock.*

*Clem was proud of her home and the feathers she wore,  
And each quarter hour she looked out of her door,  
Crying "Cuckoo" and "Cuckoo" and "Cuckoo" some more.*

*The sea gulls all liked her; when she called "Cuckoo,"  
Each one of them smiled and said, "How do you do?"  
And she always answered: "I'm fine, how are you?"*

*But one day she woke up and her throat was quite sore,  
And she scarcely had strength to look out of her door,  
She never had felt quite so wobbly before,*

*Her head was so achey, her voice was so hoarse,  
That the sea gulls advised: "Have the doctor, of course.  
He'll come right away on his very fast horse."*

*The doctor came in with his little black bag,  
And looked down her throat till she started to gag.  
After feeling her pulse, his head started to wag.*

*"You need a vacation, my dear Clementine,  
If you'll take a day off, you will quickly feel fine.  
My fee for this visit will be, one and nine."*

*The doctor went off, and poor Clemmie was frightened.  
When she tried to say "Cuckoo," she found her throat tightened;  
She'd quite lost her voice; but her spirits soon lightened.*

*For one of the sea gulls, whose name was Jo-Jo,  
Said, "Clem, if you like, I am ready to go.  
Just hop on my back and hold tightly—like so."*

*And Clementine Cuckoo, that brave, gentle bird,  
Left her clock home without saying a word,  
For if she had spoken, no one would have heard.*

*She climbed on Jo's back and clasped her arms tightly  
Right round his neck, and then Jo-Jo rose lightly  
Into the air, as he did almost nightly.*

*They flew over cities and lakes and great rivers.  
When Clemmie looked downward it gave her the shivers,  
She had to hold tighter to conquer the quivers.*

*But Jo-Jo was kind, and he said: "Don't be scarey,  
I'm used to this height and I like it, it's airy,  
And you are so light, you are just like a fairy."*

*They flew all that day, only stopping to dine,  
And when they were eating, Jo said: "Clementine,  
I do truly love you, I wish you were mine."*

*Clemmie smiled sweetly, and said: "What a shock  
My friends all would have if I gave up my clock,  
And I don't think I'd like to live out on a rock."*

*Then Jo, laughing gayly, said: "Clemmie, it's clear  
That your voice has come back. We can be of good cheer  
For I'll move in with you if you'll have me, my dear."*

*And Clementine answered: "This day began badly,  
But now I am happy. I'll marry you gladly,  
For to tell you the truth, Jo, I love you quite madly."*

*So they flew back that evening and told all the people  
That they planned to be wed in a church with a steeple,  
By a minister cousin, whose name was John Weeple.*

*And all of their friends thought that they were so lucky,  
For Clem was so lovely and Jo-Jo so plucky,  
And their little clock house was just simply ducky.*

*And so they were married; the clock now holds two,  
Jo-Jo and Clemmie, the gull and cuckoo,  
And I'm sure they'll be happy forever, aren't you?*





## Career Explorations

**D**R. J. R. Nesbitt, of the University of Manitoba's Faculty of Agriculture, took part in this year's TV short course on "This Business of Farming." During the program "Career Explorations" he answered the questions most frequently posed by young people in regard to a university education. If you are considering university training, you may find that these questions and answers will help you to arrive at a decision.

### Q. What is a university education?

**A.** In simple terms, it is a special type of education beyond Grade 12 in the arts, sciences and professions.

### Q. Why should a young person go to university?

**A.** In today's society, with automation and mechanization, it's becoming more difficult to find employment. A person with a university education will not have so much difficulty in finding a job. If a young person is interested in a professional career in such fields as agronomy, law, medicine, engineering, he must go to university because it's the only place where he can get the necessary training.

There are much more important reasons for going to university, however. It is important that we know more about man and the places where man lives. In a few years we'll be putting a man on the moon. How much do we know as individuals about the universe and about the world itself in which we live—the zoology, the soils, the plants, the animals, the people? And life is becoming more complex . . . things are moving at a faster pace. Things that happen in one part of the world affect people living in another part of the world almost immediately. A newspaper strike in New York City may have an immediate effect on the people living in Pine Falls, Man., where they produce pulp and paper. Because of drought in Russia we are directly affected. We can sell a tremendous amount of wheat there and this has an immediate effect on almost all parts of our economy. We can be in Toronto or Vancouver in 2 hours or we can be in Europe in 6 hours. All this means that we have to be thinking more about, and know more about people in other parts of the world. What are their standards? What are their beliefs? We have to be thinking about a university education for our own selfish reasons so that we can better fulfill our responsibilities in a democratic country. A democracy is dependent upon the fact that its citizens are sound thinkers, that they're operating from sound basic principles. The university is a place where an individual can get knowledge to think with and where he can develop his thinking ability . . . where he can develop his own fundamental principles.

### Q. Who should go to university?

**A.** There are three very important categories of young people. First of all there are the young people who should and do go to university. There are the young people who should go but don't. There is a fantastic waste in this category because they are not making proper use of their abilities. In other words, they haven't developed their abilities to the maximum. The third category involves young people who do go to university but should not. Parents need to realize that not everyone has the ability or desire to go to university. Many parents, due to circumstances beyond their control, didn't have an opportunity to go to university; and they are determined that their children are not going to miss this opportunity. It doesn't matter whether the young person is qualified or interested in going. Obviously the result can be disastrous and the young person will not be successful at university. Another invalid reason for going to university is money for money's sake.

### Q. How can young people determine which of these categories they fit into?

**A.** Any young person in Grade 12 with an average of 60 per cent or over should seriously consider going to university. As a guide, their average in Grade 11 should be 65 per cent. Unfortunately there are many young people whose averages are below this level. It isn't that they aren't working hard enough; often they need to be motivated by parents and teachers to use their abilities to the utmost.

### Q. How do young people decide upon the university courses they should take?

**A.** This is just like making any other decision. First, get the facts. University calendars outline the scope of university education — in agriculture, architecture, arts, commerce, dentistry, education, engineering, fine arts, home economics, interior design, law, medicine, music, nursing education, pharmacy, social work. Go through the list. Some will appeal, others will not. You need to narrow your interests down to two or three fields. Then get brochures from the faculties in which you are most interested. This way you get

the specific information you need to help you make your decision.

It's wise to talk to people already in the professions that appeal to you. For example, if you are thinking of medicine, talk with your local doctor. If agriculture appeals, see your local agricultural rep. or district home economist. These people can tell you about their profession—the training that's necessary, the work involved, the hours, the salary schedule.

### Q. What will it cost to go to university each year?

**A.** Assuming the student lives at home and does not pay board, it will cost between \$750 and \$900. If you are not living at home, costs will probably run between \$1,100 to \$1,250. This covers board and room, fees, clothing, transportation, entertainment. However the amount will vary considerably among individuals according to their likes and dislikes (Dr. Nesbitt was speaking specifically of Manitoba. Costs will vary as between provinces.)

### Q. Where will the money for a university education come from?

**A.** Some of it can come from parents, some from the student himself. There are also generous bursary and loan programs available. Money is available from the Provincial Government and the University Alumni Association. To get further information about financing a university education, discuss the matter with your school principal. V

## And Sons

*It is a proud thing when a man can place*

*The words "and Sons" above his great barn door,  
For when his booted tread must slacken pace,*

*He comes to set an even greater store*

*By small bare feet that vainly seek to catch*

*The rhythm of a stride they cannot match.*

*And as young minds run swift as young colt heels,*

*He dares to hope his dreams will cast a shade*

*Longer and broader than his height. He feels*

*A man "and Sons" need never be afraid.*

*For they and their sons' sons will march, heads high,*

*Across the sweet green earth and never die.*

—DOROTHY P. ALBAUGH

## From My Heart

*I found a lovely sloping hill  
Against a sky of blue  
And planted daffodils to make  
A valentine for you!*

*I tried to shape it like a heart  
With every bulb in place,  
Then edged it with narcissus bulbs  
To make a fringe of lace!*

*In early spring when flowers bloom  
(I hope and pray mine will)  
Then you will learn that I love you  
From my heart on the hill!*

—GEO. L. EHRLMAN

## A Model Farm in Scotland

by J. D. MacFARLANE

**T**HERE were mattresses for the cows' comfort, and a punch-button system of feeding to lighten the work load on one farm we visited. Mr. Ron Anderson of Boquhan Estate, Kippen Station, Scotland, has purchased the Estate that was formerly owned by Stephen Mitchel of Glasgow, which at one time was famous for Clydesdale horses. Mr. Anderson spent money lavishly to establish a modern dairy farm, and a Holstein herd of 100 milk cows. The farm is known as "The Ponta Rosa" around Scotland and can be seen by arrangement with the manager.

The buildings have all been rebuilt. The cow barn will stall 100 cows with each one sleeping on a mattress. The mattresses are cross-stitched, have 3 inches of padding in them, and a waterproof covering of heavy washable material.

Machinery in the buildings operates on an electric punch-button system. You push one button and this brings the grain from an underground building to the hammermill. Another button brings silage to the grinder from one of three 250-ton silos. Concentrates are added. Another button starts the grinder, and another, the elevator to the pelleting machine. This machine is heated by electricity to make pellets which are then moved to a storage bin. From this bin the pellets can be augered to the cows. There are four rows of cows tied along the length of the stable, and two augers are sufficient for them. The amount of feed can be regulated for each cow's needs. Pellets are checked periodically to make sure they provide a properly balanced ration.

The cows are kept in the barn at all times and these pellets are the only feed they get. They get exercise going back and forth to the milk parlor.

The milk parlor has easily-cleaned glass tubing, and milk goes directly into the milk truck for delivery into the city dairy.

The calves are put in single stalls at birth and fed the mother's milk at

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first and then put on a milk substitute. Each calf has an infra-red light over it for a month or so. Heifer calves are retained and male calves are either retained for herd sires or sold on the market in 1 or 2 months.

Any sick cows are kept in a hospital pen until they are in good health again. Numerous cows have picked up staples and wire in feeding. This trouble is detected by a mine detector or as we call it, a geiger counter. The metal lodges in one stomach. It is taken out by a simple operation and the cow recovers very quickly. They have never had a death from the operation.

When I was there they had rented a Holstein bull from one of the best herds in Essex, England, to breed cows and heifers to improve milk production and to obtain better showing stock.

The stock is shown at the Highland Show and other leading shows in Scotland and England. A special breeding pen built of cement and with iron gates, holds the two bulls. V

## DAIRY FARMERS TO PLAN AHEAD

(Continued from page 12)

purpose of recommending policies to meet changing situations. The Committee, which is composed of representatives of the National Dairy Council, Dairy Farmers of Canada, and Federal and Provincial Governments, was formed during the past year at the request of the Dairy Farmers of Canada.

• DFC will study ways and means for the complete separation of the Canadian Dairy Foods Service Bureau from its parent body, the Dairy Farmers of Canada. The statement notes that an important accomplishment of the year past was the

establishment of this Service Bureau on an expanded basis.

• The DFC will assemble information that could be a guide toward more uniform milk pricing arrangements with producers, regardless of the end use of the milk. Such things as milk composition, uniform quality standards, and marketing quotas will be considered.

Resolutions passed asked that the Federal Government:

1. Maintain the support price on cheese at the present level.

2. Maintain the 30 cents subsidy per 100 lb. on eligible milk going into the manufacture of cheddar cheese.

3. Extend the 30 cents subsidy per 100 lb. to all eligible milk going into the processing of all cheese made from whole milk.

4. Re-establish the export subsidy of 4 cents a lb. on cheddar cheese to the United Kingdom and,

5. To extend the export subsidy to all types of cheese made from whole milk to any country.

6. Maintain the 14½ cents subsidy on butterfat to eligible producers and the present floor price on butter.

7. Continue the present export subsidy on skim milk powder.

8. Maintain necessary measures so that producers who supply butter and casein processors receive an income not less than that of producers who supply butter and powder processors.

9. In association with the Provincial Governments, implement a policy for the distribution of milk in schools. Delegates to the meeting also asked that efforts be continued to have the quota on Canadian cheddar cheese exports to the U.S. increased. V

## MFA TO MERGE

Delegates to the annual meeting of the troubled Manitoba Federation of Agriculture voted for fast action in the efforts of the organization to merge with other farm groups for the purpose of setting up a new and stronger farm organization to represent Manitoba's farmers. The resolution called on the organization's leaders to complete the work of the liaison committee and to join with other interested groups to establish a united organization, even if all groups do not decide to join immediately. The resolution also authorized the Federation to cease operations if it is unsuccessful in establishing a united farm organization. V

## FARM ORGANIZATION OFFICERS, 1964

Canadian Federation of Agriculture: James M. Bentley has been re-elected President of the Canadian Federation of Agriculture for 1964. Re-elected First Vice-president was A. Sorel, of Montreal, Que. Second Vice-president is Ed Nelson from Edmonton, Alta.

Dairy Farmers of Canada: New President of Dairy Farmers of Canada is G. M. Strudwick, Balgonie, Sask. Past President is John Dickson of Ormstown, Que. First Vice-president is G. R. McLaughlin of Beaverton, Ont., while Second Vice-president is Glen Cole of Bewdley, Ont. V



Hi FOLKS:

It took me many years to find out I have the letters S-U-C-K-E-R stenciled on my face. They were put on with some sort of magic ink that sharp characters can see a mile away. I used to wonder why the concession boys came suddenly alert when I walked down the midway at the Fall Fair. But I know now, thanks to an old man I met in the city one day. I had just parked my car when I saw this old fella plunk down on the curb ahead of me, his long legs sticking out into the street. He looked like he was about at the end of his rope.

"Do you feel all right?" I asked him anxiously.

He nodded slowly. "Just tired," he sighed, "so very, very tired."

From his face I'd say he was at least 80 years of age. But he was broad of shoulder and straight as a soldier—the military look was heightened by a trim white moustache.

"Would you like me to take you home?" I didn't want the poor old guy's heart to go on him right in the street.

He nodded brightly, so I put a hand under his arm and helped him to his feet. It was like trying to hoist a 10-gallon can of milk up over your head. As I led him to the car I had a feeling he could've picked me up and tossed me into the back seat like a bag of groceries.

"Where do you live?" I asked, starting the motor.

He pondered this for a moment, then slowly shook his head. "I don't seem to be able to remember. I walked such a long, long way."

But when I showed signs of parking again, he hastily added, "But I think I can show you. There's a big park not far from the house."

I knew where the park was so we drove there. After we had circled it three times and driven through it twice, I slowed the car and looked at him enquiringly.

"I seem to recall a bridge," he said vaguely, "and a white house on a hill."

The only place we'd find a bridge was along the river, so we headed that way. We checked all the bridges without any success. By this time we had been cruising around for about an hour. I began to regret the time I'd spent in Sunday school learning such parables as the Good Samaritan.

But I can be foxy too. "What we need," I said casually, "is a map of the city. I think I know where I can get one."

He nodded absently, then went back to staring out the window. The

flow of traffic seemed to fascinate him.

I swung around and headed for the police station. This is one place in the city I know quite well through various tricks of Fate which I won't go into now.

As we approached the building, my passenger got a bit restless.

"If you just let me out here, I think I can find my way home on foot," he said uneasily.

But I shook my head firmly and drove on into the station courtyard. A constable came out enquiringly, and I explained the whole problem.

He peered into the car and grinned at the oldster cheerfully. "Well Mr. Barton," he said, "I see you've been for another ride."

With a resigned sigh, my passenger opened the door and climbed out.

"He likes to go for rides," the constable told me. "We have to take him home two or three times a week."

At least I would now learn the mystery of the elusive white house on the hill. "Where does he live?" I asked eagerly.

It turned out to be about a block from where I'd picked him up.

Sincerely,  
PETE WILLIAMS.

## Letters

### Guide Goes to School

After I've read each issue of the Guide from cover to cover, I take it out to my school and it is used in our Social Studies—not only in my room (Grades I, II and III), but in Mr. Fillippoff's room (Grades IV, V and VI)! I have been using it since I returned to teaching in 1945. You can see that it is a well read, well used periodical!

MRS. EUNICE MURRAY,  
Castlegar, B.C.

### Take Out the Wool!

I am surprised at a magazine of your calibre publishing an article such as you did in your December issue entitled "Wool in Our Eyes?"

In the paragraph where he discusses the flavor of New Zealand lamb, Mr. Revell states that when lamb is brought to the table, it defies experts to tell whether it was imported, or from a grain-fed Ontario lamb at three times the cost of production. I am not an expert taster, but I have eaten New Zealand lamb, and my wife and myself have

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J. H. Jowsey:  
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H. L. L. Leeds.

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eaten over 50 pounds of Canadian lamb each in the past year, and I would pay 2 to 3 times the price for fresh Canadian lamb any day.

After reading this article, I went into one of the leading chain stores in Burnaby district of Vancouver and asked the manager of the meat department for his opinion on Canadian lamb. He told me he prefers to handle the Canadian lamb anytime. Being fresh, it is a lot more attractive, has more flavor, and appeals to the customer more. He also said that people will pay more for Canadian lamb than New Zealand lamb, and this is in a working man's district.

According to Mr. Revell's article, he is evidently an advocator of free trade. Why pick on sheep as a first item? I can name other items that are costing the Canadian government and, in turn, the taxpayer, a lot more. For example, butter and hogs. I know at one time that New Zealand butter could be sold on the Canadian market cheaper than our own butter. If butter were allowed to find its own level, wouldn't we hear a scream from the dairy people.

I would also like to ask Mr. Revell what he would do about numerous manufactured goods that are produced cheaper in other countries than we can produce them here, but cannot enter this country due to trade agreements, tariffs, etc.?

When you come right down to it, there isn't a person in Canada today who is not affected by a subsidy in one form or another. Last, but not least, why are the Communist countries, such as Russia, increasing their sheep numbers by the millions? There must be a reason.

I would like to suggest to Mr. Revell that he take the wool out of his eyes, the cotton out of his ears, and miss a meal or two to sharpen up his taste buds.

R.B.B.,  
Langley, B.C.

### Wool in Our Eyes

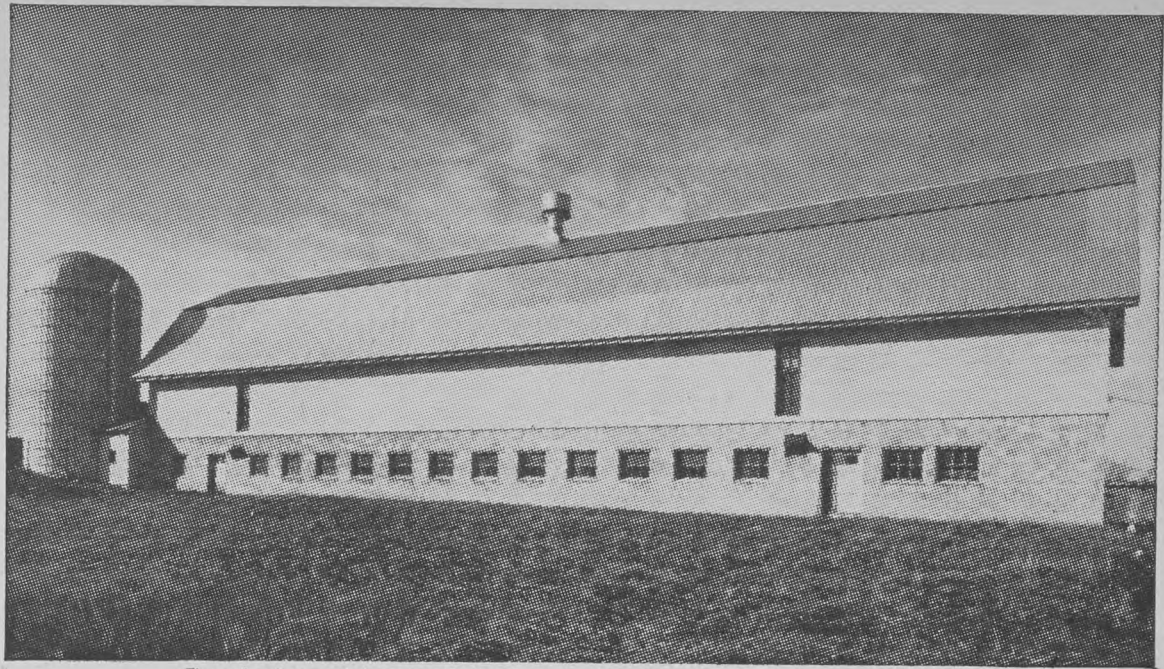
I was very much interested in the article "Wool in Our Eyes." Although I completely disagreed with it, I must say it was very helpful, for I used some of the information to encourage sheep breeding in our area. Neither I nor government pamphlets agree with Mr. Revell and until my sheep cease to be interesting, easy to handle and profitable, I shall be a sheep fan.

P.W.W.,  
Cameron, Ont.

### Hog-Tied!

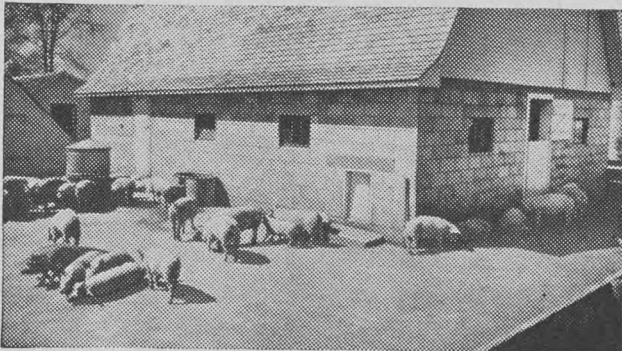
You are hog-tied, handcuffed, and shackled by interests, and only print what you are told to. The great success stories you print are the ruination of a lot of young farmers. Why not tell it all, where did they get the money to start with?

When the Federation of Agriculture recommends taking away the farmers' freedom, such as setting up marketing boards without a vote of the producers concerned, where are you? When the Ontario Government passes a bill such as Bill 106, you sit straddle of the fence or side in

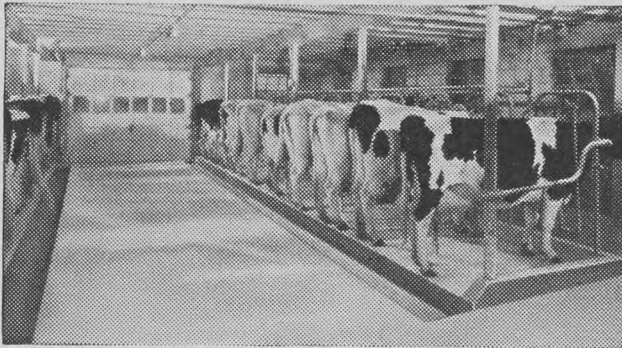


Fire-safe, all-concrete barn near Dorion, Que., showing combination of concrete panel and concrete masonry construction. The silo is built of concrete staves.

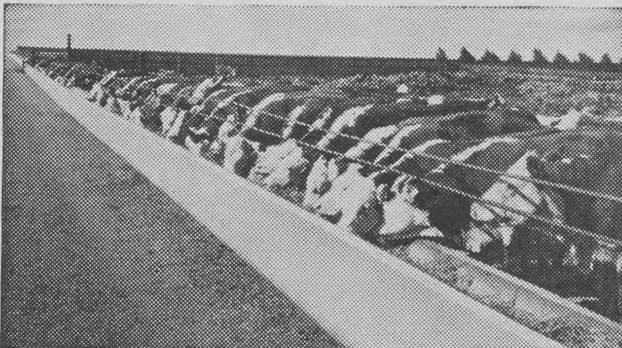
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with the interests that are ruining the family farm for a few dollars for themselves. What about the Ontario Hog Marketing Board? I can give you figures to show it is costing the producers hundreds of thousands of dollars a year. I don't think you are ignorant of that fact.

There are many things I would like to draw to your attention but I know the result of throwing water on a duck.

J.D.C.,  
Nottawa, Ont.

### Hands Off the Country People

I read your article "In Defense of Rural Development." I have been a rural dweller for 50 years. This ARDA scheme is very much in line with what originally started the "farm problem" which was the forcing of an Urban Style Education on a Rural population, so that we don't have such a thing as a true "Countryman" in Canada any more. This, of course, suits the commercial world who would prefer us to look at an "idiot box," rather than at a meadow lark.

I would like to ask these city people to read Hans Anderson's

story "The Emperor's Nightingale." They might learn something from it. The only "benefit" anybody is offered by all these schemes are material benefits. We are a society riddled to death by materialism.

Intellectually and spiritually, we are probably (with the Americans) the most completely "broke" people in the world. I want to say to the sociologists, the technologists, the educators and the do-gooders — "Hands off the country people—and their country." Of course the white collar workers don't understand rural people. How could they? They have sold themselves to the religion of "Standard of Living" and like all religious fanatics, now try to force it on others. I want to chop my wood, carry water from a spring and eat food—not garbage.

R.D.S.,  
Regina, Sask.

### Build a Fence

A suggestion that a toddling child be tethered to a clothesline is dangerous indeed. If by some chance a loop of the rope or cord were to be around the child's neck at the time

that it stumbled, the child could easily strangle with no chance to alarm the parents. It would be far safer to erect a fence.

Also in the Letters column, H.O.J. rudely calls down one of your authors for shooting flying birds. He (or she) states that birds should be shot while sitting so that a higher percentage of outright kills would be made. It is apparent that H.O.J. has never shot too many sitting ducks. A duck or goose sitting on water is actually harder to kill than is a flying bird, as at least two-thirds of the vital organs are below water level and are shielded from the full force of the pellets. At close range, sure kills can be made easily, but at any distance at all, unless a hit in the head or neck is scored, the bird will probably escape. It will probably carry one or more of the hunter's pellets in the back area, a non-vital region. These ducks stand a slim chance of reaching an old age, because of the almost sure appearance of either lead-poisoning or a fatal infection.

Rather than condemn the hunter who shoots a flying bird, it would seem more logical to chastise the

hunter who shoots at game that is not within reasonable range of his gun, whether that game is flying, running or standing.

A.R.W.,  
Tofield, Alta.

### Against Glass

A big yell has gone up about contaminated grain. Who's surprised to read the headlines, "Russia finds glass in seven cargoes of wheat," when we also read advertisements by breweries: "Empty Beer Bottles Needed," or "Critical Shortage of Glass."

All I can say is I hope Russia doesn't subscribe to our local papers. We farmers have been complaining about glass containers for years. This fall while harvesting my crop, the combine operator put a case of beer through his machine that had been hidden there under the swath. Container and all went through with a bang and the odor of beer was everywhere.

Twenty bushels in the hopper were spoiled. It didn't go to Russia. My neighbor is feeding it to his chickens. When the stevedors were told that anyone coming to work with a bottle on his person would be turned back, what happened? Almost immediately the same refreshment was available in plastic containers.

Let's hope the same changeover can be made throughout Canada.

A.L.,  
Vermilion, Alta.

### Lesson on Salesmanship

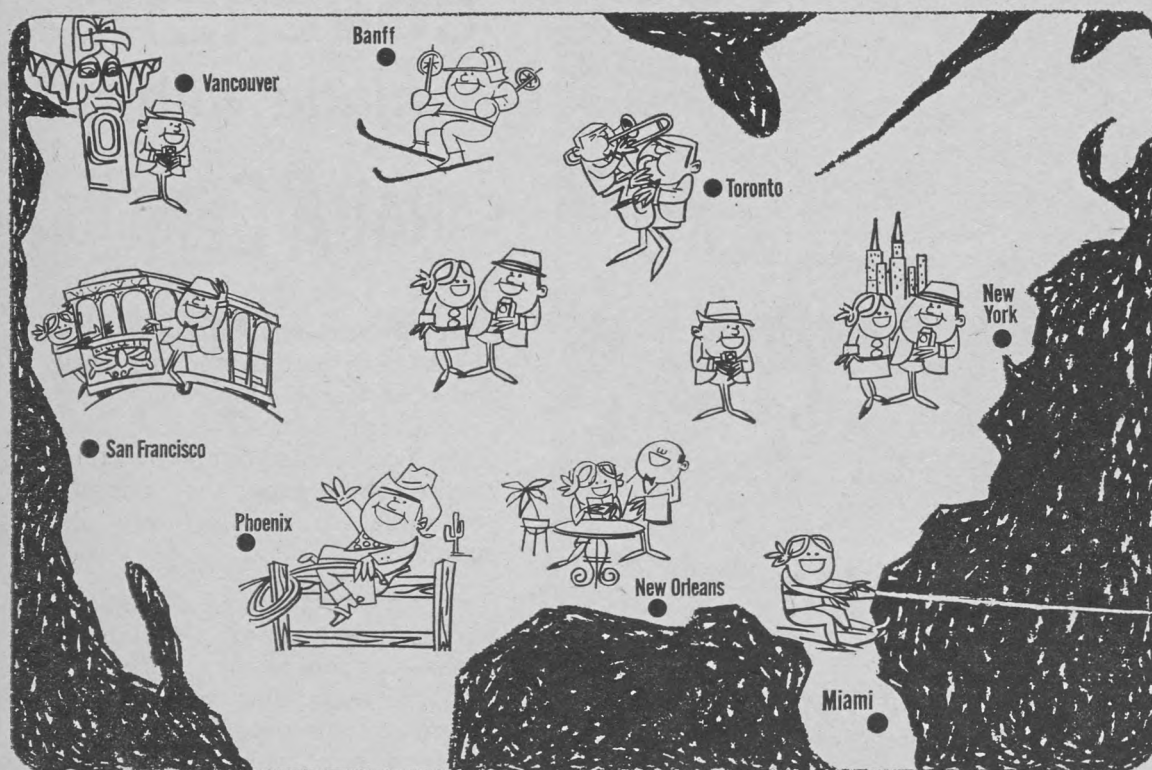
We usually find a lot of good information in the Guide but we have come to a letter on Poor Butter in your issue of January '64, and signed by G.W. of Ladysmith, B.C. It is very annoying and confusing. One thing certain, this proves that paper will not refuse ink. At our home we consume 4 gallons of milk per day and enjoy every last glass of it. We have very little dentist work, either — some of the family have not required dentist work in over 30 years.

We purchase more than 50 lb. of 1st grade butter from our Alliston Dairy each month and although I have traveled through several countries, I have never tasted butter that I liked quite as well.

We also buy 40 lb. or more of cheddar cheese from our Co-op milk plant each month, 15 lb. of cottage cheese and 30 lb. of yogurt. This is all produced from surplus fluid milk. We are just average consumers, at least in our area. In reply to G.W. re our surplus of butter, I say this: we require a National program of free milk in school and we also require a Provincial and possibly a National milk marketing plan.

Finally I say to G.W., please pay us a friendly call any time and sit in for a good bite to eat. I could also perhaps treat G.W. at the same time to a few lessons on salesmanship and it won't be done by knocking the neighbor's cow or his product as he has attempted to do.

H. O. PARLIAMENT,  
Alliston, Ont.



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